

RE: 2411-0320-I - Cooper III Rev.4-Elev - 7-Roof

Trenco
 818 Soundside Rd
 Edenton, NC 27932

Site Information:

Project Customer: DRB Raleigh Project Name: DRB Raleigh Model Track

Lot/Block: Subdivision:

Model: Cooper III Rev. 4

Address:

City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2021/TPI2014

Design Program: MiTek 20/20 25.2

Wind Code: ASCE 7-16

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Wind Speed: 120 mph

Floor Load: N/A psf

Roof Load: 40.0 psf

Exposure Category: B

Mean Roof Height (feet): 25

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I74616768	A3	7/2/25	35	I74616802	V3	7/2/25
2	I74616769	P1	7/2/25	36			
3	I74616770	B1	7/2/25	37	I74616804	PB1G	7/2/25
4				38	I74616805	D1G	7/2/25
5				39	I74616806	D1	7/2/25
6	I74616773	PB3	7/2/25	40			
7				41	I74616808	A3G	7/2/25
8					I74616809	V5	7/2/25
9	I74616776	C1	7/2/25	43	I74616810	C1G	7/2/25
10	I74616777	C1A	7/2/25	44	I74616811	V7	7/2/25
11	I74616778	V2	7/2/25	45	I74616812	V6	7/2/25
12	I74616779	V1	7/2/25	46	I74616813	A5	7/2/25
13	I74616780	P2	7/2/25	47	I74616814	A4AT	7/2/25
14	I74616781	PB1	7/2/25	48	I74616815	A5G	7/2/25
				49	I74616816	G2G	7/2/25
16	I74616783	VG4	7/2/25	50	I74616817	H2G	7/2/25
17					I74616818	H2	7/2/25
18	I74616785	PB4	7/2/25				
19	I74616786	G2B	7/2/25				
20	I74616787	A4A	7/2/25				
21	I74616788	G2	7/2/25				
22	I74616789	G2A	7/2/25				
23	I74616790	A1T	7/2/25				
	I74616791	A1A	7/2/25				
25	I74616792	H1	7/2/25				
26							
27	I74616794	PB3G	7/2/25				
28	I74616795	P1G	7/2/25				
29							
30	I74616797	B1G	7/2/25				
31							
32							
	I74616800	P2G	7/2/25				
34	I74616801	V4	7/2/25				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Structural, LLC.

Truss Design Engineer's Name: Tony Miller

My license renewal date for the state of North Carolina is December 31, 2025.

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.



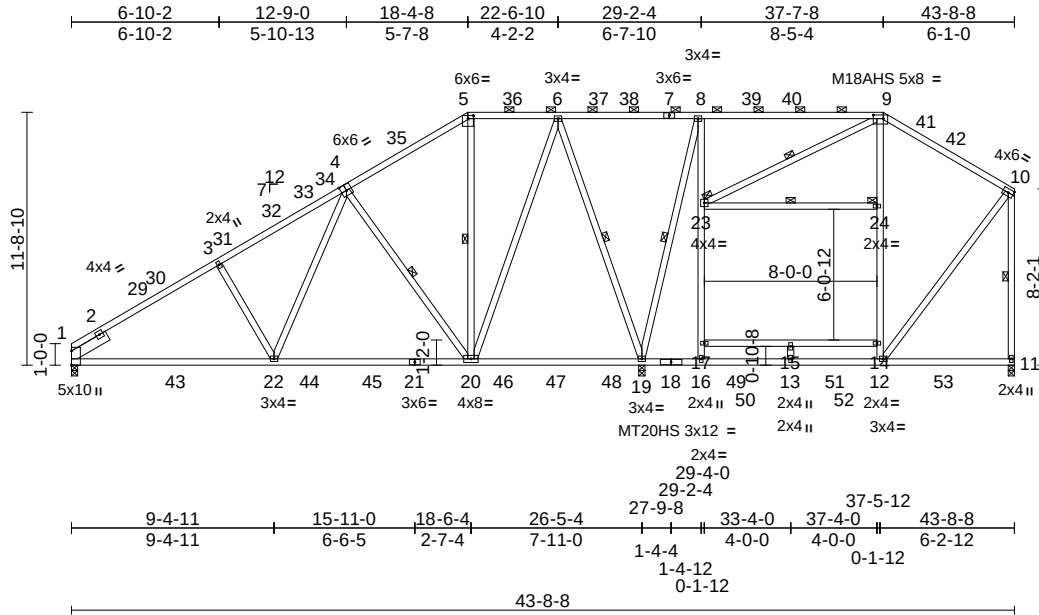
July 2, 2025

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	A3	Attic	12	1	Job Reference (optional)	I74616768

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.20 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:35
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Scale = 1:106.8

Plate Offsets (X, Y): [4:0-3-0,0-3-4], [5:0-3-0,0-1-12], [9:0-5-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.40	20-22	>795	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.54	20-22	>591	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.05	11	n/a	n/a	MT20HS	187/143
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	20-22	>999	240		
BCDL	10.0											
											Weight: 341 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 7-9:2x4 SP SS
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3 *Except* 8-16,9-12,23-24:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-0-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-20, 8-19, 23-24, 10-11, 4-20, 9-23, 6-19

JOINTS 1 Brace at Jt(s): 23, 24

REACTIONS (size) 1=0-3-8, 11=0-3-8, 19=0-3-8
Max Horiz 1=186 (LC 16)
Max Grav 1=1406 (LC 53), 11=1331 (LC 55), 19=2289 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-3=-1988/104, 3-5=-1873/5, 5-6=-884/36, 6-8=-353/19, 8-9=-581/0, 9-10=-752/0, 10-11=-1249/0
BOT CHORD 1-22=-183/1720, 20-22=-2/1389, 19-20=0/613, 16-19=0/575, 13-16=0/570, 12-13=0/570, 11-12=-5/16
WEBS 5-20=-45/299, 8-19=-1355/0, 16-17=0/709, 17-23=0/791, 8-23=0/796, 12-14=-234/120, 14-24=-174/165, 9-24=-174/165, 15-17=0/10, 14-15=0/10, 23-24=0/13, 3-22=-262/104, 4-22=0/584, 10-12=0/954, 4-20=-840/79, 9-23=-33/0, 13-15=0/195, 6-20=-23/866, 6-19=-962/44

NOTES

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-4, Interior (1) 4-4-4 to 18-4-8, Exterior(2R) 18-4-8 to 24-6-7, Interior (1) 24-6-7 to 37-7-8, Exterior(2E) 37-7-8 to 43-6-12 zone; cantilever left and right exposed ; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) 250.0lb AC unit load placed on the bottom chord, 33-4-0 from left end, supported at two points, 5-0-0 apart.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) The Fabrication Tolerance at joint 9 = 16%
- 9) Plates checked for a plus or minus 5 degree rotation about its center.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 12) Bottom chord live load (20.0 psf) and additional bottom chord dead load (20.0 psf) applied only to room. 13-16, 12-13
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 16) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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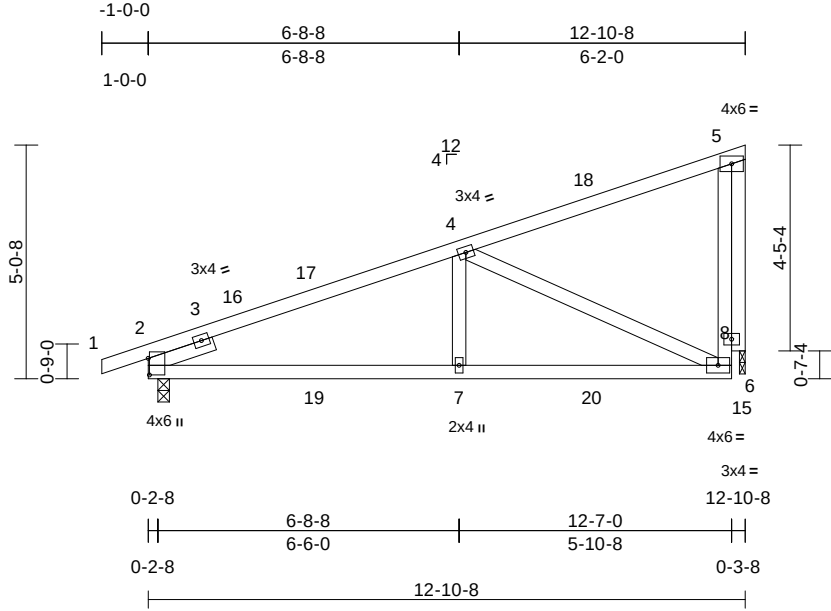
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	I74616769
2411-0320-I	P1	Monopitch	12	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:49.7

Plate Offsets (X, Y): [2:0-4-5,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.14	6-7	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.18	6-7	>842	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	7-13	>999	240		
BCDL	10.0										Weight: 68 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-0, 15=0-1-8
Max Horiz 2=101 (LC 12)
Max Uplift 2=-86 (LC 12), 15=-91 (LC 12)
Max Grav 2=590 (LC 2), 15=512 (LC 23)

FORCES

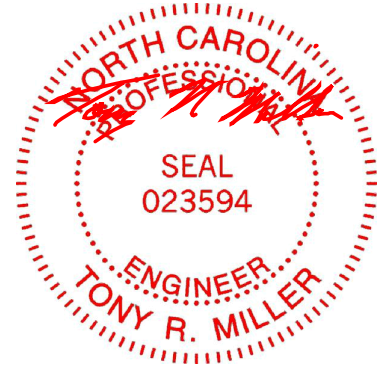
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-736/229, 4-5=-153/10,
6-8=-155/441, 5-8=-155/441
BOT CHORD 2-7=-304/657, 6-7=-304/657
WEBS 4-7=-63/353, 4-6=-639/305, 5-15=-515/210

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-5-4 zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 15.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 15. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)

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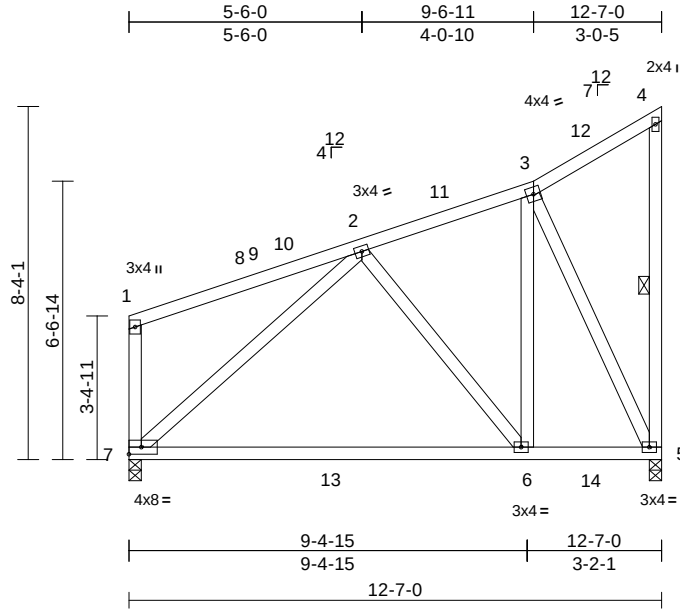
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616770
2411-0320-I	B1	Roof Special	18	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.33	6-7	>442	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.48	6-7	>309	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.00	6-7	>999	240		
BCDL	10.0										Weight: 93 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP SS
WEBS	2x4 SP No.3 *Except* 7-1:2x4 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 4-5

REACTIONS

(size)	5=0-3-8, 7=0-3-8
Max Horiz	7=104 (LC 16)
Max Uplift	5=-33 (LC 16)
Max Grav	5=507 (LC 22), 7=499 (LC 42)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-127/41, 2-3=-287/0, 3-4=-87/68, 4-5=-277/58, 1-7=-317/79
BOT CHORD	6-7=-141/338, 5-6=-44/212
WEBS	2-7=-391/0, 2-6=-206/163, 3-6=-19/427, 3-5=-507/99

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 7-10-4 to 10-10-4, Interior (1) 10-10-4 to 20-1-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

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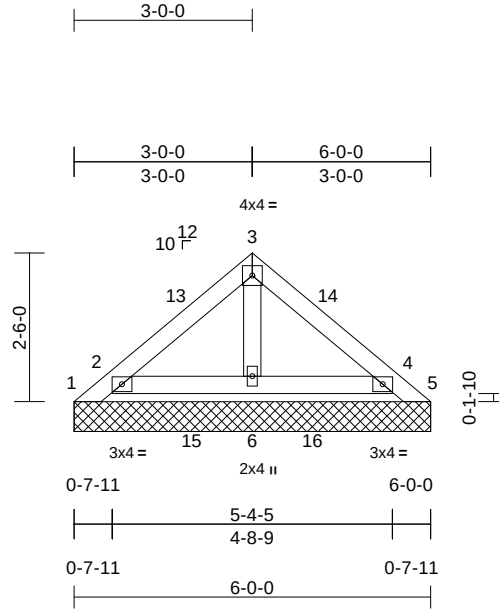
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616773
2411-0320-I	PB3	Piggyback	30	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.33	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	10	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 21 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	1=6-0-0, 2=6-0-0, 4=6-0-0, 5=6-0-0, 6=6-0-0
	Max Horiz	1=-37 (LC 12)
	Max Uplift	1=-215 (LC 42), 2=-25 (LC 16), 4=-21 (LC 17), 5=-213 (LC 43)
	Max Grav	1=221 (LC 40), 2=460 (LC 58), 4=449 (LC 56), 5=223 (LC 52), 6=328 (LC 59)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-55/150, 2-3=-157/87, 3-4=-157/85, 4-5=-38/149
BOT CHORD	2-6=-80/54, 4-6=-80/54
WEBS	3-6=-197/2

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 2, 21 lb uplift at joint 4, 215 lb uplift at joint 1, 213 lb uplift at joint 5, 25 lb uplift at joint 2 and 21 lb uplift at joint 4.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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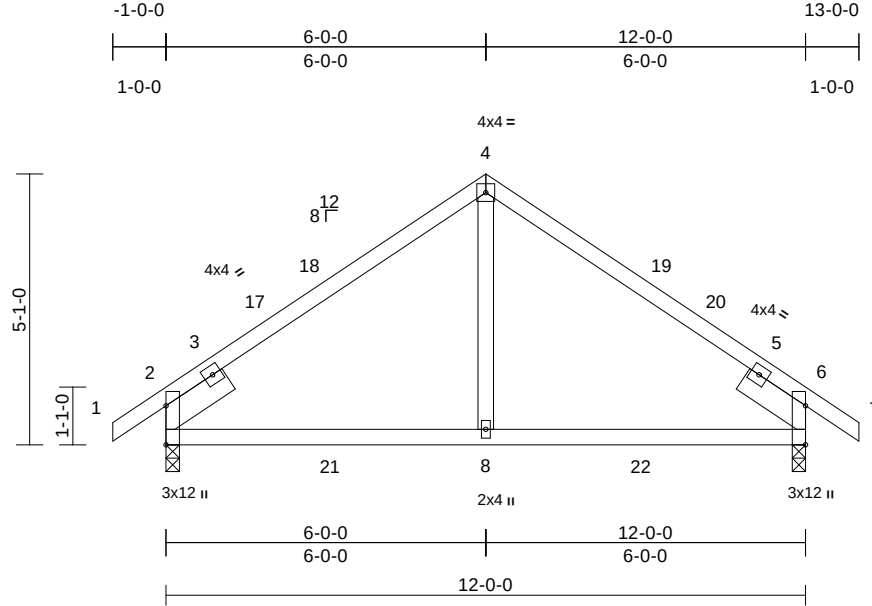
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	C1	Common	8	1	Job Reference (optional)	I74616776

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:39
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Page: 1



Scale = 1:43.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.12	8-15	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.14	8-15	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	8-11	>999	240		
BCDL	10.0										Weight: 57 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	2=0-3-0, 6=0-3-0
Max Horiz	2=75 (LC 15)
Max Grav	2=540 (LC 2), 6=540 (LC 2)

FORCES

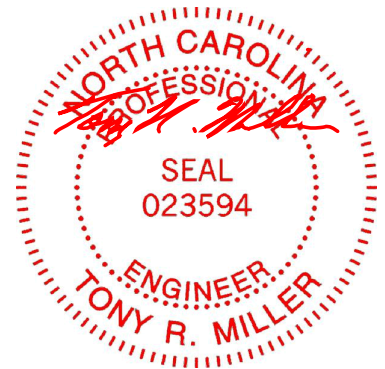
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/45, 2-4=-485/276, 4-6=-485/276, 6-7=0/45
BOT CHORD	2-8=-81/333, 6-8=-81/333
WEBS	4-8=-87/347

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2, 2025

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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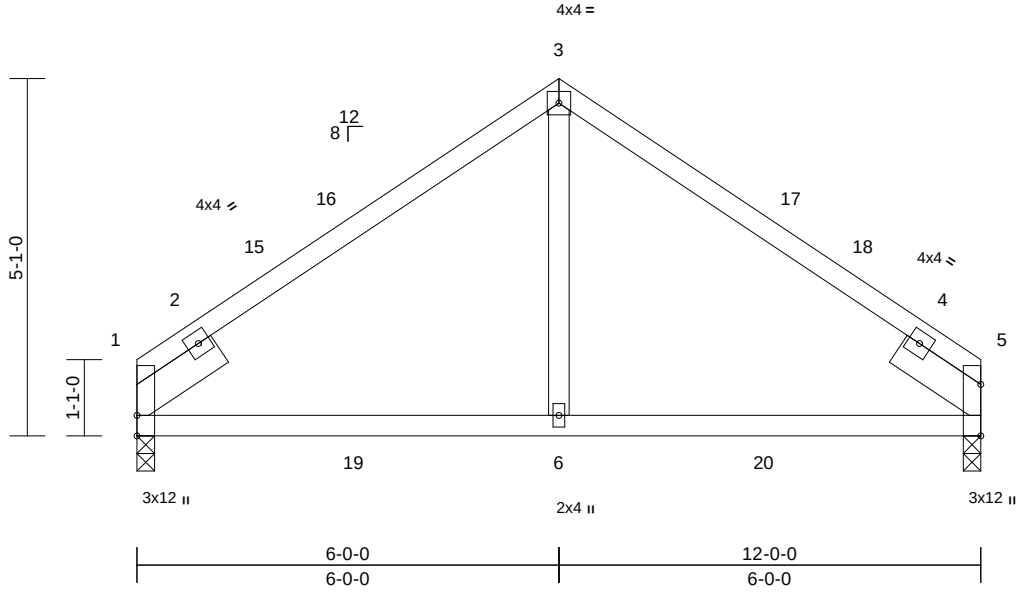
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	I74616777
2411-0320-I	C1A	Common	2	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 E May 29 2025 Print: 25.2.0 E May 29 2025 MiTek Industries, Inc. Wed Jul 02 13:41:53
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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.12	6-13	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.14	6-13	>999	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.08	1	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.14	6-9	>999	240		
BCDL	10.0											
											Weight: 53 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(lb/size)	1=425/0-3-0, 5=425/0-3-0
Max Horiz	1=64 (LC 47)
Max Uplift	1=-474 (LC 47), 5=-474 (LC 46)
Max Grav	1=779 (LC 38), 5=779 (LC 39)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-394/363, 2-15=-919/820, 15-16=-775/691, 3-16=-632/575, 3-17=-632/578, 17-18=-775/694, 4-18=-919/823, 4-5=-361/363
BOT CHORD	1-19=-679/756, 6-19=-387/501, 6-20=-387/501, 5-20=-679/756
WEBS	3-6=-87/349

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 12-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 1, 5.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 474 lb uplift at joint 1 and 474 lb uplift at joint 5.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss has been designed for a total drag load of 100 plf. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 12-0-0 for 100.0 plf.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

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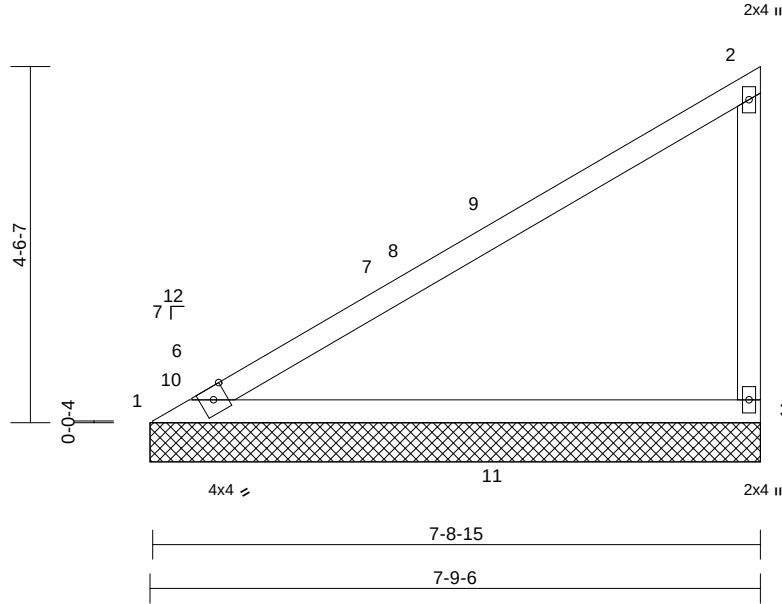
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	V2	Valley	6	1	Job Reference (optional)	I74616778

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:45
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Page: 1



Scale = 1:29.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.62	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.02	3	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0									Weight: 30 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP SS
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=7-9-6, 3=7-9-6
Max Horiz 1=93 (LC 16)
Max Uplift 3=-18 (LC 16)
Max Grav 1=406 (LC 42), 3=406 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-656/105, 2-3=-331/103
BOT CHORD 1-3=-115/561

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 7-7-10 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 3.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

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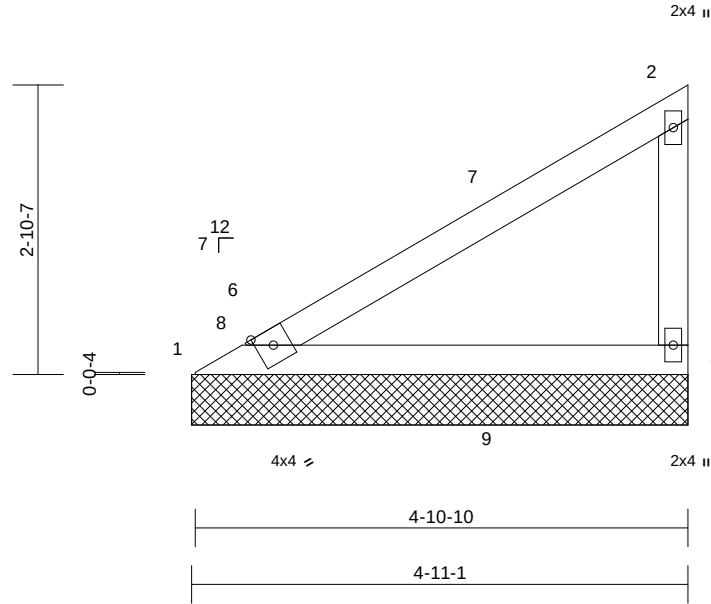
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	V1	Valley	6	1	Job Reference (optional)

I74616779

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:44
ID:R8EgX9mOYDsF689owsl8YGzjY8I-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:22.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.65	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 18 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.

BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=4-11-1, 3=4-11-1
Max Horiz 1=57 (LC 16)
Max Uplift 3=-10 (LC 16)
Max Grav 1=349 (LC 42), 3=349 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-518/82, 2-3=-300/69

BOT CHORD 1-3=-95/446

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-9-5 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.

- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 3.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 2, 2025

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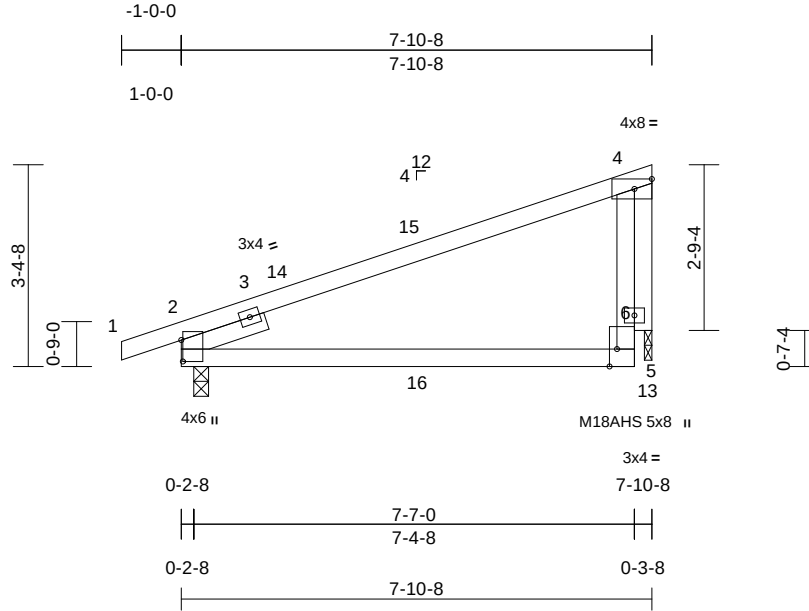
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	P2	Monopitch	18	1	Job Reference (optional)	I74616780

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:38.6

Plate Offsets (X, Y): [2:0-4-5,0-0-5], [5:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.15	5-11	>622	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.21	5-11	>453	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	5-11	>999	240		
BCDL	10.0											
											Weight: 35 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	2=0-3-0, 13=0-1-8
Max Horiz	2=65 (LC 12)
Max Uplift	2=-61 (LC 12), 13=-53 (LC 12)
Max Grav	2=449 (LC 40), 13=373 (LC 43)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/26, 2-4=-391/166, 5-6=-65/330, 4-6=-154/321
BOT CHORD	2-5=-154/201
WEBS	4-13=-376/43

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-5-4 zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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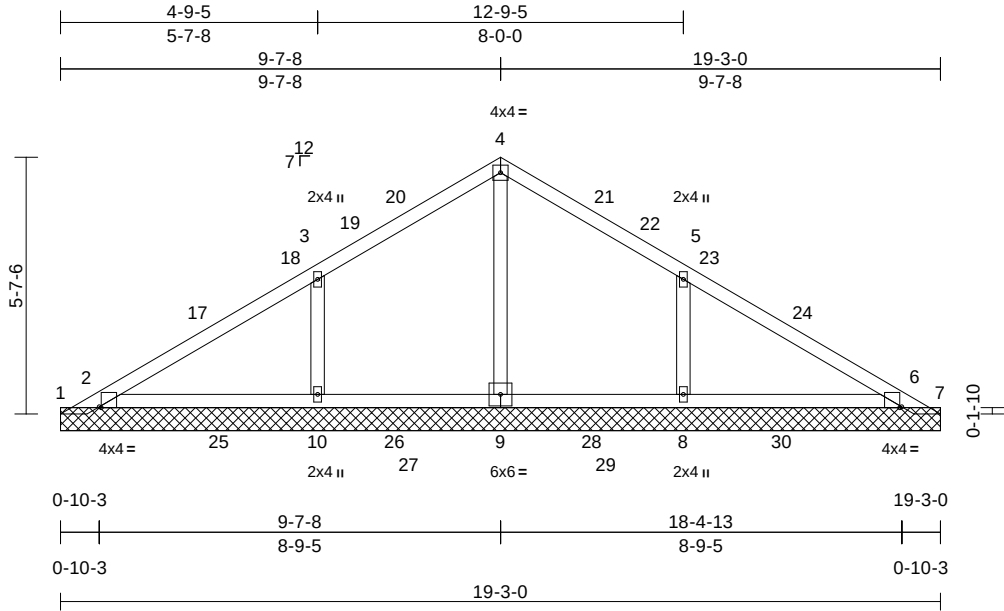
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	PB1	Piggyback	27	1	Job Reference (optional)	I74616781

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.20 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:43
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Page: 1



Scale = 1:50.4

Plate Offsets (X, Y): [2:0-0-9,Edge], [6:0-0-9,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.79	Vert(TL)	n/a	-	n/a	999	
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	6	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 74 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS (size)	1=19-3-0, 2=19-3-0, 6=19-3-0,
	7=19-3-0, 8=19-3-0, 9=19-3-0,
Max Horiz	1=-87 (LC 12)
	Max Uplift 1=-396 (LC 42), 2=-6 (LC 16),
Max Grav	7=-393 (LC 45), 8=-27 (LC 17),
	10=-27 (LC 16)
Max Grav	1=141 (LC 40), 2=674 (LC 42),
	6=661 (LC 45), 7=144 (LC 56),
Max Grav	8=449 (LC 31), 9=380 (LC 66),
	10=449 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-92/227, 2-3=-127/221, 3-4=-131/90,
	4-5=-131/86, 5-6=-114/219, 6-7=-13/210
BOT CHORD	2-10=-219/54, 8-10=-17/54, 6-8=-219/54
WEBS	4-9=-268/0, 3-10=-346/101, 5-8=-346/101

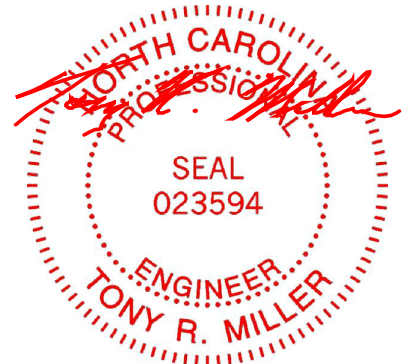
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 9-7-8, Exterior(2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 18-11-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 396 lb uplift at joint 1 and 393 lb uplift at joint 7.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



July 2, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)

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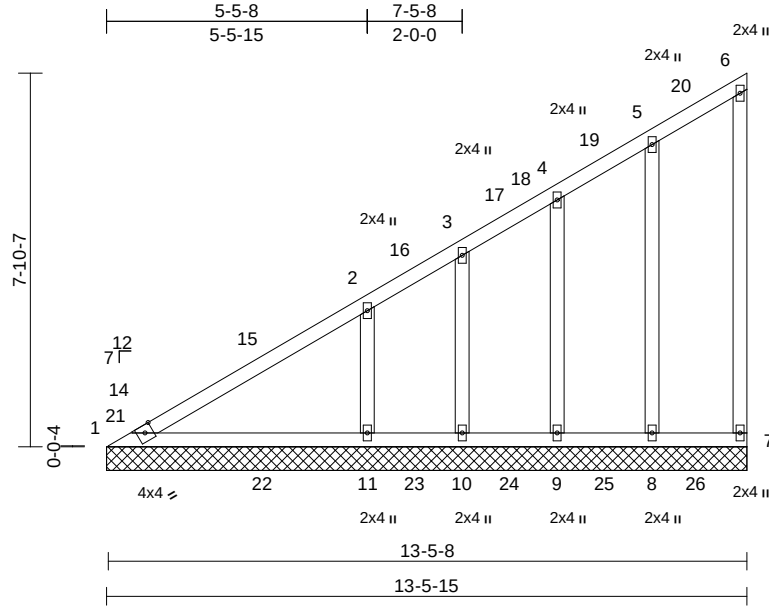
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616783
2411-0320-I	VG4	Valley	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:45

Page: 1

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Scale = 1:48.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.54	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.01	11	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0									Weight: 79 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	1=13-5-15, 7=13-5-15, 8=13-5-15, 9=13-5-15, 10=13-5-15, 11=13-5-15
	Max Horiz	1=166 (LC 16)
	Max Uplift	7=-5 (LC 16), 8=-9 (LC 16), 9=-11 (LC 16), 10=-156 (LC 53), 11=-16 (LC 16)
	Max Grav	1=342 (LC 46), 7=283 (LC 63), 8=334 (LC 62), 9=351 (LC 61), 10=254 (LC 60), 11=547 (LC 53)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-487/167, 2-3=-135/72, 3-4=-106/79, 4-5=-75/73, 5-6=-84/62, 6-7=-264/22
BOT CHORD	1-11=-61/419, 10-11=0/2, 9-10=0/2, 8-9=0/2, 7-8=0/2
WEBS	5-8=-278/57, 4-9=-287/61, 3-10=-246/103, 2-11=-365/110

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 13-4-3 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 7, 9 lb uplift at joint 8, 11 lb uplift at joint 9, 156 lb uplift at joint 10 and 16 lb uplift at joint 11.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2, 2025

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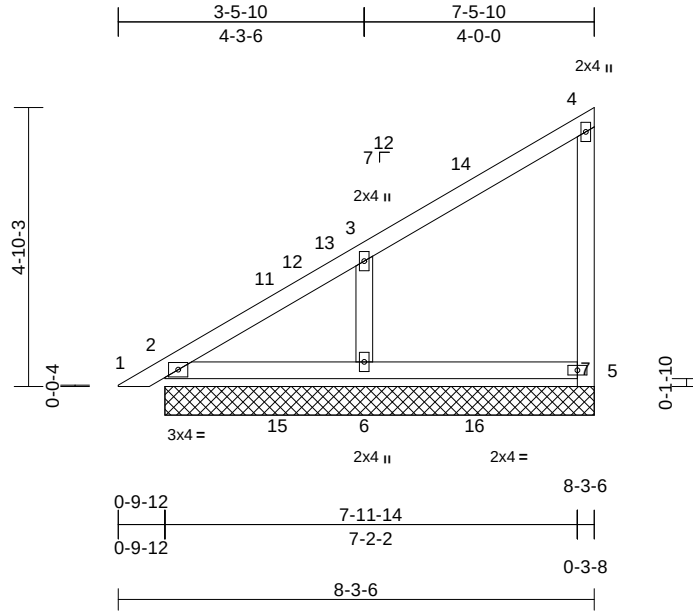
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616785
2411-0320-I	PB4	Piggyback	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:44
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Page: 1



Scale = 1:40.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	2	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
Weight: 34 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	2=7-5-10, 5=7-5-10, 6=7-5-10, 7=7-5-10
	Max Horiz	2=98 (LC 16)
	Max Uplift	5=-8 (LC 16), 6=-25 (LC 16)
	Max Grav	2=315 (LC 47), 5=313 (LC 53), 6=435 (LC 52)

FORCES	(lb) - Maximum Compression/Maximum Tension
	1-2=0/22, 2-3=-127/93, 3-4=-101/62, 5-7=0/0, 4-5=-283/44

BOT CHORD	2-6=-22/78, 5-6=0/0
WEBS	3-6=-343/126

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 8-2-1 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 7, 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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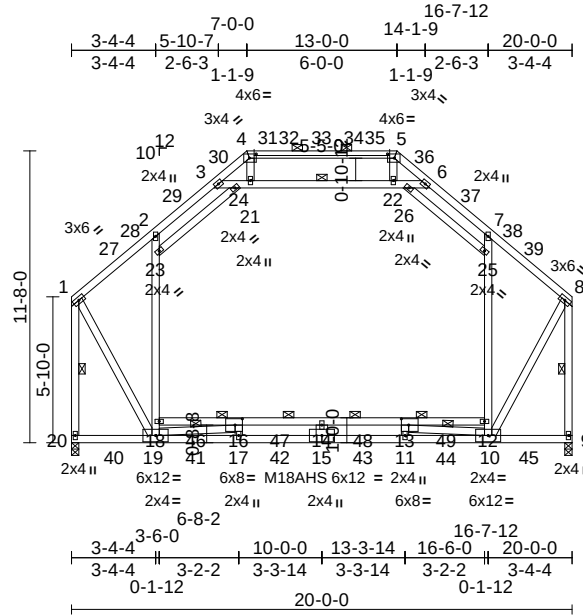
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	G2B	Attic	8	1	Job Reference (optional)	I74616786

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.20 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:41
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Page: 1



Scale = 1:92.1

Plate Offsets (X, Y): [4:0-3-4,0-2-0], [5:0-3-4,0-2-0], [13:0-3-8,0-3-0], [16:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.37	14	>643	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.65	14	>366	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.06	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	-0.12	10-11	>999	240		
BCDL	10.0											
											Weight: 184 lb FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3 *Except* 2-19,7-10,3-6:2x4 SP No.2, 15-14:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-4-6 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 3-6, 1-20, 8-9, 10-13, 16-19

REACTIONS

(size) 9=0-3-8, 20=0-3-8
Max Horiz 20=196 (LC 15)
Max Grav 9=1626 (LC 51), 20=1626 (LC 51)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-854/0, 2-3=-787/94, 3-4=-658/112, 4-5=-584/132, 5-6=-658/108, 6-7=-831/172, 7-8=-872/0, 1-20=-1658/0, 8-9=-1646/0
BOT CHORD 19-20=-193/198, 17-19=0/3708, 11-17=0/3708, 10-11=0/3708, 9-10=-75/89, 16-18=-166/281, 14-16=-3221/0, 13-14=-3221/0, 12-13=-167/262
WEBS 18-19=-403/86, 18-23=-361/245, 2-23=-256/265, 10-12=-403/98, 12-25=-361/245, 7-25=-256/265, 3-24=-651/240, 21-24=-588/154, 21-22=-586/154, 22-26=-591/154, 6-26=-699/240, 1-19=0/1158, 8-10=0/1158, 14-15=-130/111, 4-21=-82/118, 5-22=-82/118, 16-17=0/247, 11-13=0/247, 10-13=-3412/0, 16-19=-3412/0, 23-24=-227/208, 25-26=-206/220

NOTES

- 1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-4-4, Interior (1) 3-4-4 to 7-0-10, Exterior(2R) 7-0-10 to 11-3-9, Interior (1) 11-3-9 to 12-11-6, Exterior(2R) 12-11-6 to 17-2-4, Interior (1) 17-2-4 to 19-10-4 zone; cantilever left and right exposed; end vertical right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Ceiling dead load (5.0 psf) on member(s). 2-3, 6-7, 3-24, 21-24, 21-22, 22-26, 6-26; Wall dead load (5.0psf) on member(s).18-23, 2-23, 12-25, 7-25
- 11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 16-18, 14-16, 13-14, 12-13
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- 13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 2, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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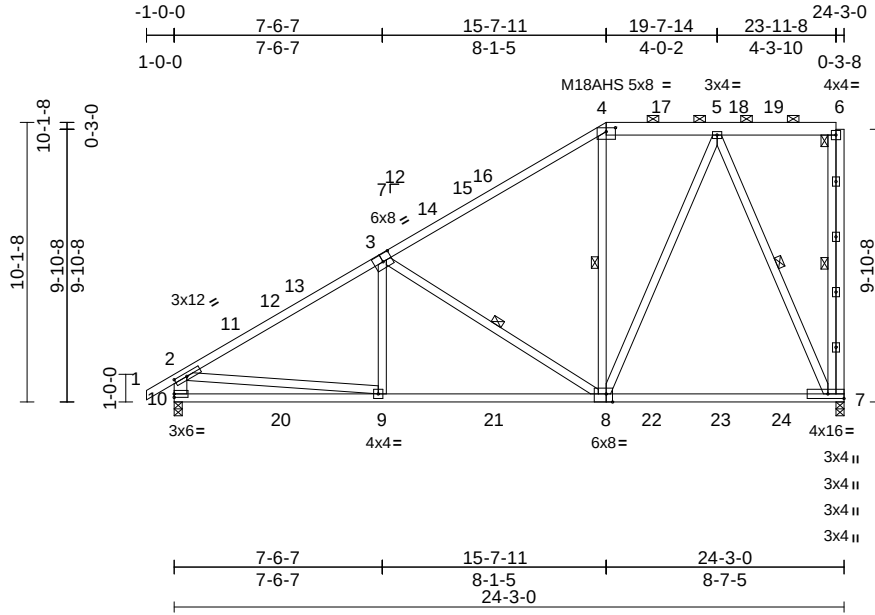
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	A4A	Piggyback Base	1	1	Job Reference (optional)	I74616787

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:38
ID:X6fz5k6uCWTC9dlojlyCKbyAQcN-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:83.4

Plate Offsets (X, Y): [2:0-5-8,0-1-8], [3:0-4-0,0-3-4], [4:0-4-0,0-1-11], [8:0-2-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.27	7-8	>999	360	M18AHS	186/179
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.36	7-8	>786	240	MT20	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	8-9	>999	240		
BCDL	10.0										Weight: 190 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 4-6:2x6 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3 *Except* 10-2:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 6-7, 3-8, 4-8, 5-7

REACTIONS

(size) 7=0-3-8, 10=0-3-8
Max Horiz 10=203 (LC 16)
Max Grav 7=1117 (LC 42), 10=1210 (LC 45)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/51, 2-4=-1572/0, 4-5=-685/27,

5-6=-33/0, 6-7=-300/26, 2-10=-1083/0

BOT CHORD 9-10=-201/481, 7-9=-61/1348

WEBS 3-9=0/340, 3-8=-780/67, 4-8=-130/139,

2-9=0/933, 5-7=-867/47, 5-8=-31/854

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-4-14, Interior (1) 2-4-14 to 15-7-11, Exterior(2R) 15-7-11 to 20-5-8, Interior (1) 20-5-8 to 24-1-4 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) Plates checked for a plus or minus 5 degree rotation about its center.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 2, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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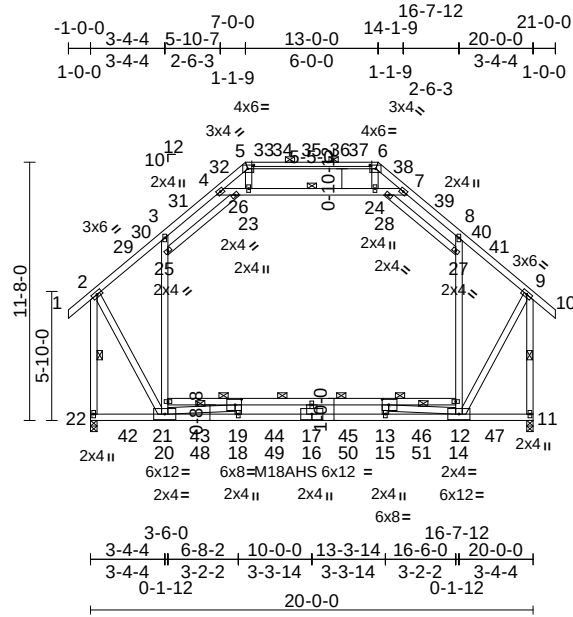
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	G2	Attic	1	1	174616788
Job Reference (optional)					

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.20 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:40
ID:XXZ?22VbBuVQg4ZVskfK2Oy3nLJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:104.1

Plate Offsets (X, Y): [5:0-3-4,0-2-0], [6:0-3-4,0-2-0], [15:0-3-8,0-3-0], [18:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.37	16	>643	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.64	16	>367	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.06	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	-0.13	19-21	>999	240		
BCDL	10.0										Weight: 187 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3 *Except* 3-21,8-12,4-7:2x4 SP No.2, 17-16:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-4-1 max.): 5-6.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-7, 2-22, 9-11, 12-15, 18-21

REACTIONS (size) 11=0-3-8, 22=0-3-8
Max Horiz 22=238 (LC 15)
Max Grav 11=1716 (LC 48), 22=1716 (LC 48)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/72, 2-3=-874/0, 3-4=-832/202, 4-5=-659/103, 5-6=-587/114, 6-7=-659/107, 7-8=-834/205, 8-9=-873/0, 9-10=0/72, 2-22=-1746/0, 9-11=-1747/0

BOT CHORD 21-22=-222/240, 19-21=0/3704, 13-19=0/3704, 12-13=0/3704, 11-12=-73/88, 18-20=-189/299, 16-18=-3219/0, 15-16=-3219/0, 14-15=-197/305

WEBS 20-21=-394/111, 20-25=-353/249, 3-25=-243/270, 12-14=-394/60, 14-27=-353/249, 8-27=-243/270, 4-26=-692/245, 23-26=-577/158, 23-24=-573/158, 24-28=-574/158, 7-28=-691/245, 2-21=0/1173, 9-12=0/1174, 16-17=-130/111, 5-23=-83/117, 6-24=-83/117, 18-19=0/247, 13-15=0/247, 12-15=-3412/0, 18-21=-3412/0, 25-26=-249/238, 27-28=-251/241

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-0-10, Exterior(2R) 7-0-10 to 11-3-9, Interior (1) 11-3-9 to 12-11-6, Exterior(2R) 12-11-6 to 17-2-4, Interior (1) 17-2-4 to 21-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-26, 23-26, 23-24, 24-28, 7-28; Wall dead load (5.0psf) on member(s).20-25, 3-25, 14-27, 8-27
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 18-20, 16-18, 15-16, 14-15

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 2,2025

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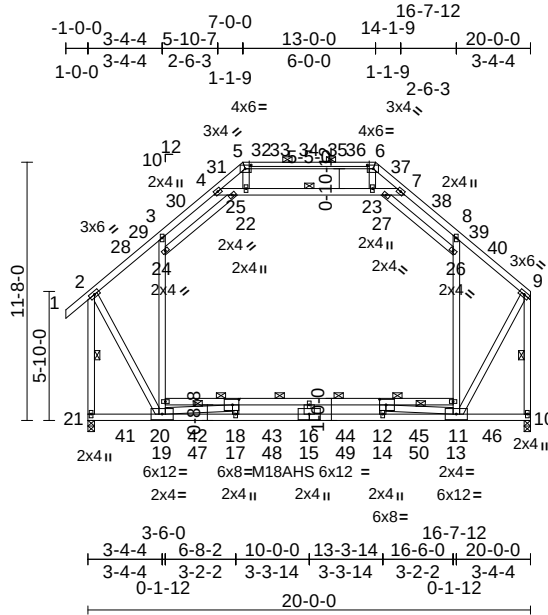
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616789
2411-0320-I	G2A	Attic	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:104.1

Plate Offsets (X, Y): [5:0-3-4,0-2-0], [6:0-3-4,0-2-0], [14:0-3-8,0-3-0], [17:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.37	15	>643	360	MT20 244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.64	15	>367	240	M18AHS 186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.06	10	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	-0.13	18-20	>999	240	
BCDL	10.0										
Weight: 185 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3 *Except* 3-20,8-11,4-7:2x4 SP No.2, 16-15:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-4-1 max.): 5-6.

BOT CHORD Rigid ceiling directly applied.

WEBS 1 Row at midpt 4-7, 2-21, 9-10, 11-14, 17-20

REACTIONS (size) 10=0-3-8, 21=0-3-8

Max Horiz 21=233 (LC 13)

Max Grav 10=1623 (LC 48), 21=1719 (LC 48)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/72, 2-3=-877/0, 3-4=-824/218, 4-5=-658/107, 5-6=-585/116, 6-7=-659/107, 7-8=-845/189, 8-9=-867/0, 2-21=-1748/0, 9-10=-1659/0

BOT CHORD 20-21=-241/222, 18-20=0/3706, 12-18=0/3706, 11-12=0/3706, 10-11=-75/89, 17-19=-182/300, 15-17=-3220/0, 14-15=-3220/0, 13-14=-205/295

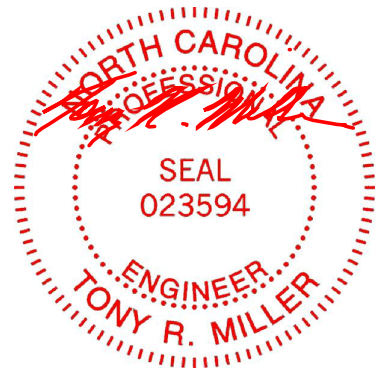
WEBS 19-20=-391/112, 19-24=-353/249, 3-24=-237/271, 11-13=-405/86, 13-26=-361/245, 8-26=-262/264, 4-25=-690/245, 22-25=-585/156, 22-23=-581/156, 23-27=-582/156, 7-27=-703/239, 2-20=0/1175, 9-11=0/1169, 15-16=-130/111, 5-22=-83/117, 6-23=-82/118, 17-18=0/247, 12-14=0/247, 11-14=-3409/0, 17-20=-3415/0, 24-25=-249/229, 26-27=-240/249

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-0-10, Exterior(2R) 7-0-10 to 11-3-9, Interior (1) 11-3-9 to 12-11-6, Exterior(2R) 12-11-6 to 17-2-4, Interior (1) 17-2-4 to 19-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-25, 22-25, 22-23, 23-27, 7-27; Wall dead load (5.0psf) on member(s).19-24, 3-24, 13-26, 8-26
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 17-19, 15-17, 14-15, 13-14

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 2,2025

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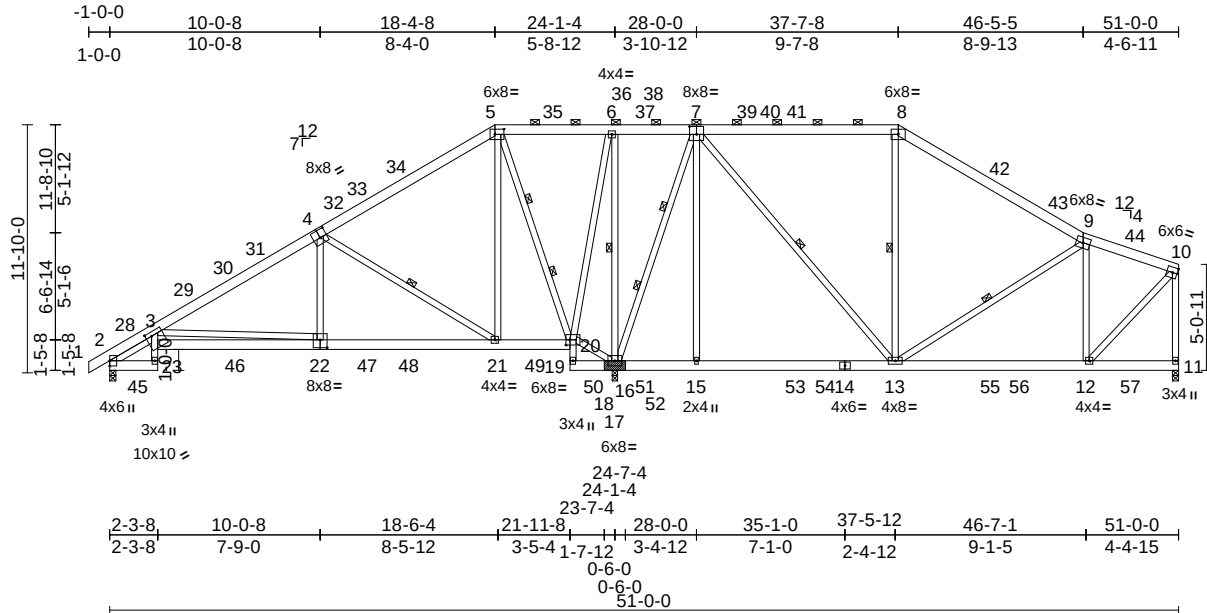
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616790
2411-0320-I	A1T	Piggyback Base	4	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:33
ID:bFWe8TnXnA2q4vi43k0QCqyAQoy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:109.9

Plate Offsets (X, Y): [3:0-3-8,0-2-4], [4:0-4-0,0-4-8], [5:0-5-4,0-3-0], [7:0-4-0,0-4-8], [20:0-2-4,0-3-0], [22:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.15	3-22	>999	360	MT20
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.29	3-22	>999	240	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.14	17	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS		Wind(LL)	0.09	3-22	>999	240	
BCDL	10.0										
Weight: 468 lb FT = 20%											

LUMBER		WEBS	4-22=0/479, 4-21=-1220/214, 5-21=-15/827, 8-13=-564/178, 9-13=-439/131, 9-12=-362/154, 10-12=-88/712, 6-17=-942/102, 6-20=-56/893, 17-20=-1623/283, 5-20=-1770/225, 7-15=0/399, 7-13=-169/1441, 7-17=-1827/218
TOP CHORD	2x6 SP No.2		
BOT CHORD	2x6 SP No.2 *Except* 23-3,20-19:2x4 SP No.3		
WEBS	2x4 SP No.3 *Except* 7-13:2x4 SP No.2		
SLIDER	Left 2x4 SP No.2 ~ 2-3-14		
BRACING		NOTES	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-8.	1) 2x6 SP No.2 bearing block 12" long at jt. 17 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SP No.2.	
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 12-13.	2) Unbalanced roof live loads have been considered for this design.	
WEBS	1 Row at midpt 4-21, 8-13, 9-13, 6-17, 7-13	3) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 4-1-0, Interior (1) 4-1-0 to 18-4-8, Exterior(2R) 18-4-8 to 25-6-13, Interior (1) 25-6-13 to 37-7-8, Exterior(2R) 37-7-8 to 44-9-13, Interior (1) 44-9-13 to 50-10-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60	
WEBS	2 Rows at 1/3 pts 5-20, 7-17	4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0	
REACTIONS	(size) 2=0-3-8, 11=0-3-8, 17=(0-3-0 + bearing block), (req. 0-4-3) Max Horiz 2=153 (LC 16) Max Uplift 11=81 (LC 12) Max Grav 2=481 (LC 58), 11=799 (LC 66), 17=3565 (LC 33)	5) Unbalanced snow loads have been considered for this design.	
FORCES	(lb) - Maximum Compression/Maximum Tension	6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.	
TOP CHORD	1-2=0/41, 2-3=-249/74, 3-5=-335/1098, 5-6=-63/1413, 6-8=-320/1584, 8-9=-506/291, 9-10=-529/82, 10-11=-762/92	7) Provide adequate drainage to prevent water ponding.	
BOT CHORD	2-23=-82/151, 3-23=-23/340, 3-21=-122/259, 20-21=-776/202, 19-20=-114/64, 17-19=-88/21, 15-17=-1027/206, 13-15=-1027/206, 12-13=-63/491, 11-12=-1/8	8) Plates checked for a plus or minus 5 degree rotation about its center.	
		9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	

- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 2,2025

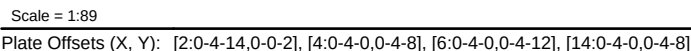
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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818 Soundside Road
Edenton, NC 27932

Structural, LLC, Thurmont, MD - 21788, Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:31 Page: 1
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[illegible]

A circular red ink seal for a Professional Engineer in North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "ENGINEER" at the bottom. The center of the seal contains the word "SEAL" above the number "023594". A signature, "TONY R. MILLER", is written across the seal in red ink.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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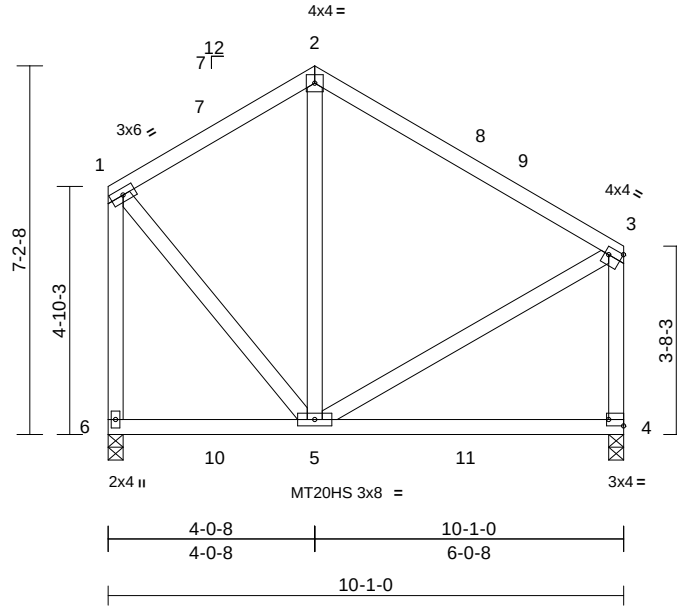
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	H1	Common	3	1	Job Reference (optional)

I74616792

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:42
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Page: 1



Scale = 1:45.1

Plate Offsets (X, Y): [3:Edge,0-1-12], [4:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.13	4-5	>919	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.16	4-5	>737	240	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0											
											Weight: 72 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 4=0-3-8, 6=0-3-8
Max Horiz 6=-54 (LC 12)
Max Grav 4=449 (LC 48), 6=449 (LC 46)

FORCES

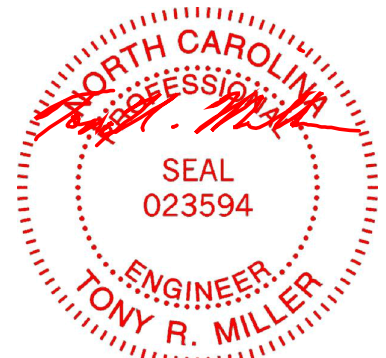
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-233/77, 2-3=-269/64, 1-6=-422/90, 3-4=-393/73
BOT CHORD 5-6=-47/57, 4-5=-12/53
WEBS 1-5=-30/252, 3-5=0/169, 2-5=-165/87

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 6-8-15 to 9-8-15, Interior (1) 9-8-15 to 10-7-11, Exterior(2R) 10-7-11 to 13-7-11, Interior (1) 13-7-11 to 16-6-7 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.

- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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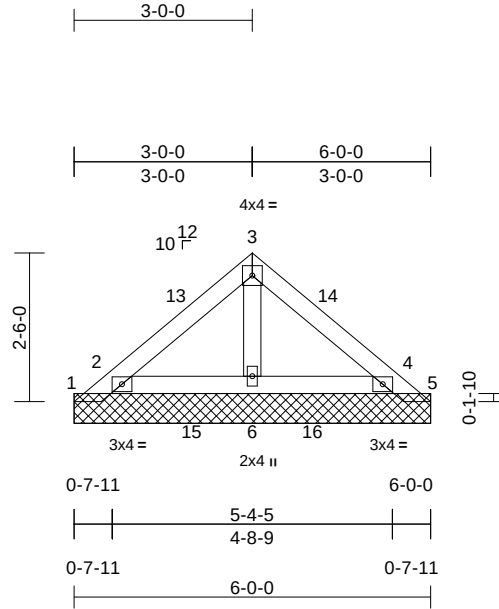
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616794
2411-0320-I	PB3G	Piggyback	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:44

Page: 1

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Scale = 1:38.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.33	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	10	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 21 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS	(size)	1=6-0-0, 2=6-0-0, 4=6-0-0, 5=6-0-0, 6=6-0-0
	Max Horiz	1=-37 (LC 12)
	Max Uplift	1=-215 (LC 42), 2=-25 (LC 16), 4=-21 (LC 17), 5=-213 (LC 43)
	Max Grav	1=221 (LC 40), 2=460 (LC 58), 4=449 (LC 56), 5=223 (LC 52), 6=328 (LC 59)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-55/150, 2-3=-157/87, 3-4=-157/85, 4-5=-38/149
BOT CHORD	2-6=-80/54, 4-6=-80/54
WEBS	3-6=-197/2

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 2, 21 lb uplift at joint 4, 215 lb uplift at joint 1, 213 lb uplift at joint 5, 25 lb uplift at joint 2 and 21 lb uplift at joint 4.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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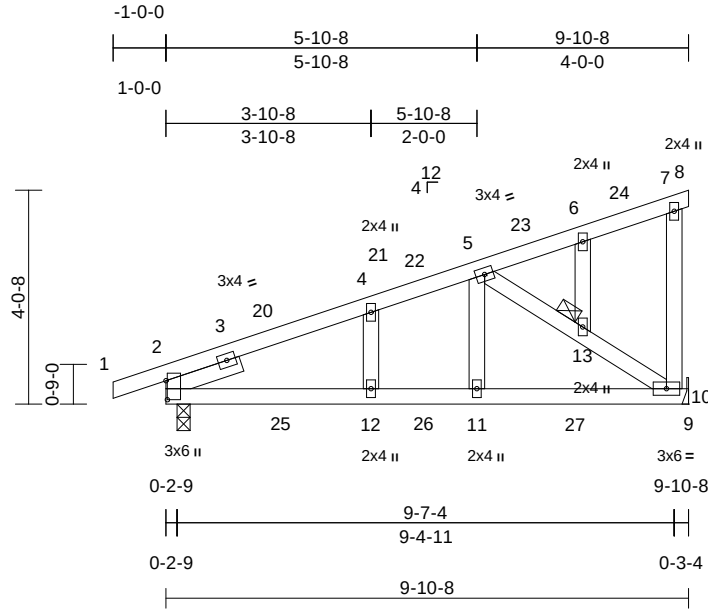
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616795
2411-0320-I	P1G	Monopitch Structural Gable	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:43
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Page: 1



Scale = 1:43.5

Plate Offsets (X, Y): [2:0-4-5,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.05	12-18	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.07	12-18	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	12-18	>999	240		
BCDL	10.0											
										Weight: 53 lb	FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 13

REACTIONS (size) 2=0-2-15, 10= Mechanical
Max Horiz 2=82 (LC 12)
Max Uplift 2=-68 (LC 12), 10=-71 (LC 12)
Max Grav 2=483 (LC 40), 10=447 (LC 46)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-476/166, 4-5=-463/182, 5-6=-81/11, 6-7=-49/41, 7-8=-6/0, 7-10=-281/56
BOT CHORD 2-12=-257/417, 11-12=-257/417, 10-11=-257/417, 9-10=0/0
WEBS 5-13=-496/298, 10-13=-497/306, 6-13=-92/16, 5-11=-81/316, 4-12=-107/144

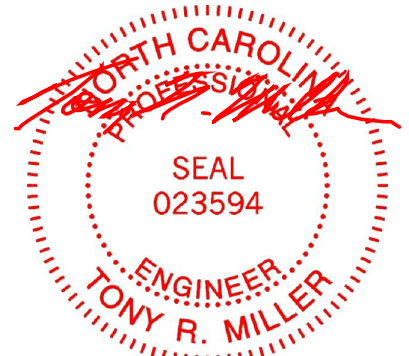
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 9-10-8 zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 10.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2, 2025

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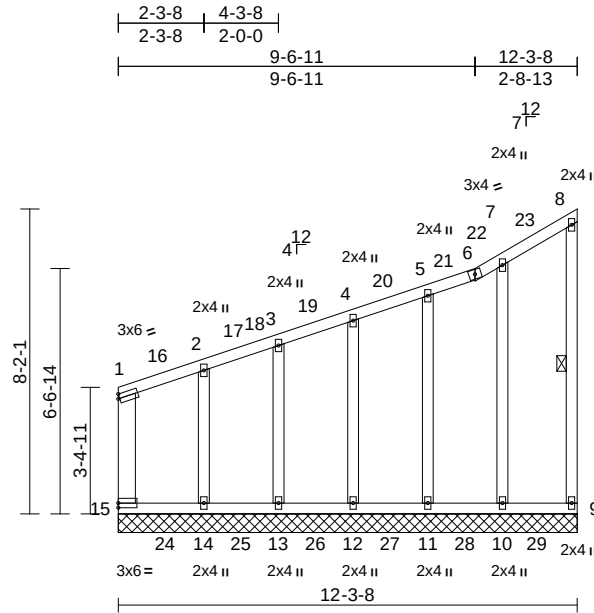
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	B1G	Roof Special Supported Gable	3	1	Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:39
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Page: 1



Scale = 1:61.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.60	Vert(TL)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.00	9	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 93 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x6 SP No.2 *Except* 8-9:2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 8-9

REACTIONS

(size)	9=12-3-8, 10=12-3-8, 11=12-3-8, 12=12-3-8, 13=12-3-8, 14=12-3-8, 15=12-3-8
Max Horiz	15=100 (LC 16)
Max Uplift	9=-30 (LC 16), 11=-2 (LC 16), 12=-13 (LC 16), 14=-231 (LC 16)
Max Grav	9=284 (LC 66), 10=336 (LC 65), 11=333 (LC 64), 12=334 (LC 63), 13=330 (LC 62), 14=344 (LC 61), 15=287 (LC 60)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-15=-269/64, 1-2=-305/95, 2-3=-177/55, 3-4=-159/50, 4-5=-117/45, 5-6=-79/25, 6-7=-75/112, 7-8=-84/62, 8-9=-265/75
BOT CHORD	14-15=-14/5, 13-14=-14/5, 12-13=-14/5, 11-12=-14/5, 10-11=-14/5, 9-10=-14/5
WEBS	7-10=-279/70, 5-11=-277/96, 4-12=-278/110, 3-13=-279/30, 2-14=-288/382

NOTES

- 1) Unbalanced roof live loads have been considered for this design.

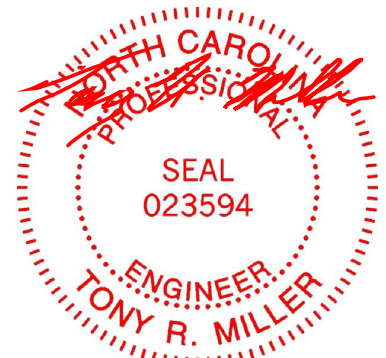
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 7-11-4 to 10-11-4, Exterior(2N) 10-11-4 to 19-10-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Gable requires continuous bottom chord bearing.
- 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) N/A

- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S)

Standard

- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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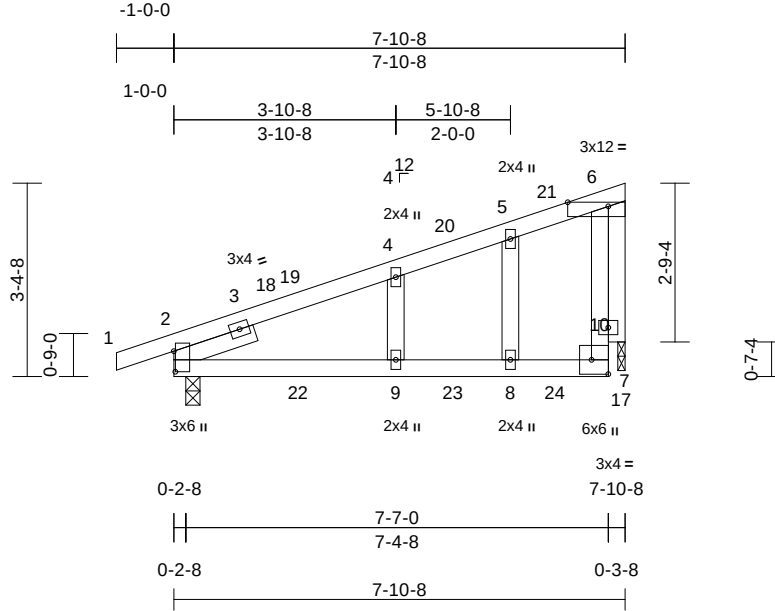
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	P2G	Monopitch Structural Gable	3	1	174616800
Job Reference (optional)					

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:43
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Page: 1



Scale = 1:40.2

Plate Offsets (X, Y): [2:0-4-5,0-0-5], [6:0-8-8,Edge], [7:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.09	9-15	>999	360	MT20
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.15	9-15	>641	240	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.03	2	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.09	9-15	>999	240	
BCDL	10.0										
Weight: 41 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	2=0-3-0, 17=0-1-8
Max Horiz	2=65 (LC 12)
Max Uplift	2=-61 (LC 12), 17=-53 (LC 12)
Max Grav	2=449 (LC 40), 17=373 (LC 45)

FORCES

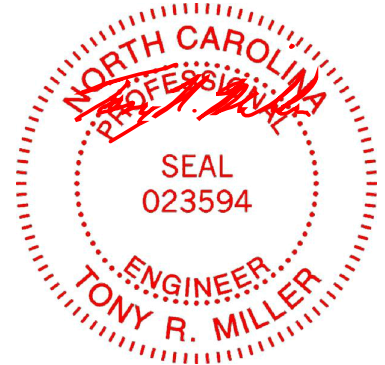
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/26, 2-4=-252/119, 4-5=-236/90, 5-6=-171/100, 7-10=-101/318, 6-10=-42/146
BOT CHORD	2-9=-141/201, 8-9=-141/201, 7-8=-141/201
WEBS	5-8=-107/141, 4-9=-123/129, 6-17=-268/146

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-5-4 zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 17.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 17. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

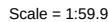
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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Structural, LLC, Thurmont, MD - 21788, Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:45 Page: 1
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LUMBER		4) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.2	
WEBS	2x4 SP No.3	
OTHERS	2x4 SP No.3	5) Unbalanced snow loads have been considered for this design.
BRACING		6) Plates checked for a plus or minus 5 degree rotation about its center.
TOP CHORD	Structural wood sheathing directly applied, except end verticals.	7) Gable requires continuous bottom chord bearing.
BOT CHORD	Rigid ceiling directly applied.	8) Gable studs spaced at 4-0-0 oc.
REACTIONS	(size) 1=13-5-15, 5=13-5-15, 6=13-5-15, 7=13-5-15	9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
	Max Horiz 1=166 (LC 16)	10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
	Max Uplift 5=-9 (LC 16), 6=-22 (LC 16), 7=-20 (LC 16)	11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 5, 22 lb uplift at joint 6 and 20 lb uplift at joint 7.
	Max Grav 1=344 (LC 44), 5=321 (LC 55), 6=418 (LC 5), 7=537 (LC 29)	12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
FORCES	(lb) - Maximum Compression/Maximum Tension	13) This truss has been designed for a moving concentrated load of 250 0lb live and 3,0lb dead located at all mid
TOP CHORD	1-2=-497/164, 2-3=-129/86, 3-4=-101/65, 4-5=-286/45	
BOT CHORD	1-7=-61/428, 6-7=-1/8, 5-6=-1/8	
WEBS	3-6=-325/118, 2-7=-365/123	

- ## NOTES
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust)
Vasd=95mph; TCdL=6.0psf; BCdL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 13-4-3 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

LOAD CASE(S) Standard



July 2, 2025



WARNING – Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-17-15169: 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building design, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



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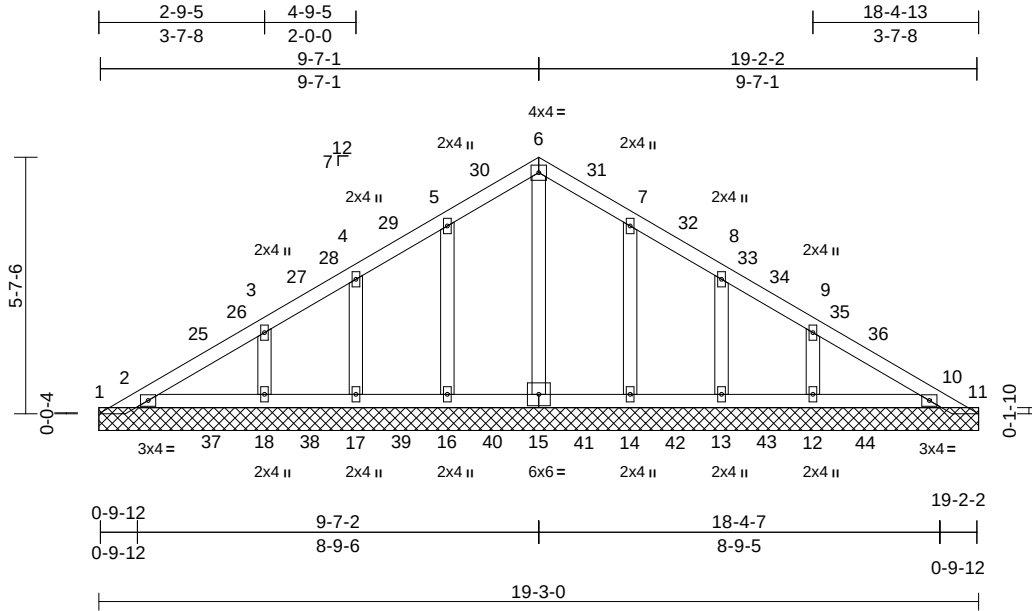
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	I74616804
2411-0320-I	PB1G	Piggyback	3	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:43

Page: 1

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.38	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 90 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size)
1=19-3-0, 2=19-3-0, 10=19-3-0,
11=19-3-0, 12=19-3-0, 13=19-3-0,
14=19-3-0, 15=19-3-0, 16=19-3-0,
17=19-3-0, 18=19-3-0
Max Horiz 1=87 (LC 13)
Max Uplift 1=-165 (LC 66), 11=-162 (LC 73),
12=-14 (LC 17), 13=-10 (LC 17),
14=-10 (LC 17), 16=-10 (LC 16),
17=-10 (LC 16), 18=-13 (LC 16)
Max Grav 1=223 (LC 40), 2=453 (LC 76),
10=440 (LC 74), 11=225 (LC 64),
12=354 (LC 83), 13=326 (LC 82),
14=336 (LC 81), 15=323 (LC 80),
16=336 (LC 79), 17=326 (LC 78),
18=355 (LC 77)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-97/131, 2-3=-84/68, 3-4=-83/65,
4-5=-78/70, 5-6=-105/91, 6-7=-105/89,
7-8=-78/70, 8-9=-83/65, 9-10=-84/67,
10-11=-4/94
BOT CHORD 2-18=-76/53, 17-18=-27/53, 16-17=-27/53,
14-16=-27/53, 13-14=-27/53, 12-13=-27/53,
10-12=-76/53
WEBS 6-15=-239/5, 5-16=-285/53, 4-17=-281/42,
3-18=-299/47, 7-14=-285/53, 8-13=-282/42,
9-12=-299/47

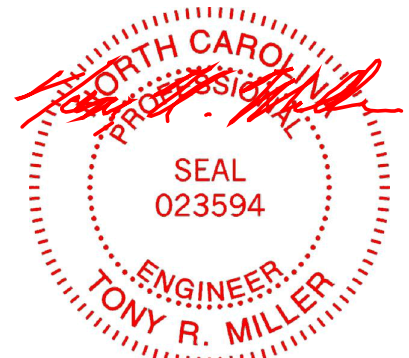
NOTES

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 9-7-8, Exterior(2R) 9-7-8 to 12-7-8, Interior (1) 12-7-8 to 18-11-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 165 lb uplift at joint 1, 162 lb uplift at joint 11, 10 lb uplift at joint 16, 10 lb uplift at joint 17, 13 lb uplift at joint 18, 10 lb uplift at joint 14, 10 lb uplift at joint 13 and 14 lb uplift at joint 12.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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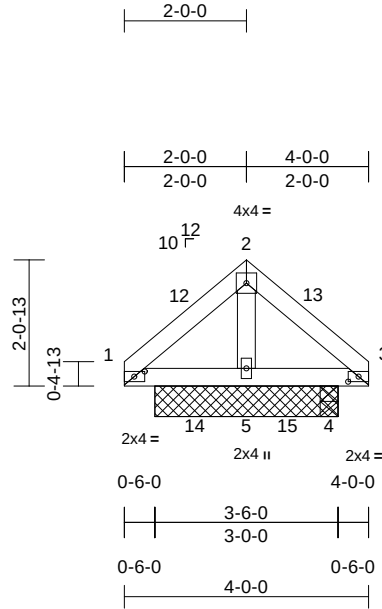
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	D1G	Common Supported Gable	6	1	Job Reference (optional)

I74616805

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:39
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Page: 1



Scale = 1:37.7

Plate Offsets (X, Y): [1:0-2-1,0-1-0], [3:0-2-1,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.00	4-5	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	0.00	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Wind(LL)	0.00	4-5	>999	240		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 16 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4=0-3-8, 5=3-0-0
Max Horiz 4=293 (LC 48), 5=-293 (LC 48)
Max Uplift 4=-374 (LC 39)
Max Grav 4=374 (LC 47), 5=787 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-37/384, 2-3=-70/410
BOT CHORD 1-5=-293/94, 4-5=0/0, 3-4=-293/94
WEBS 2-5=-545/123

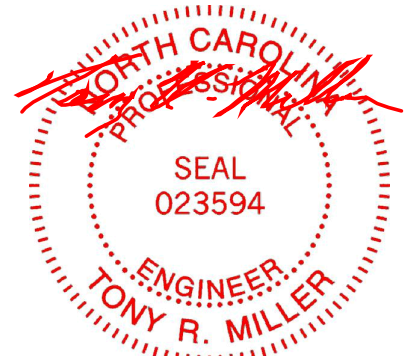
NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A

- Non Standard bearing condition. Review required.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Edenton, NC 27932

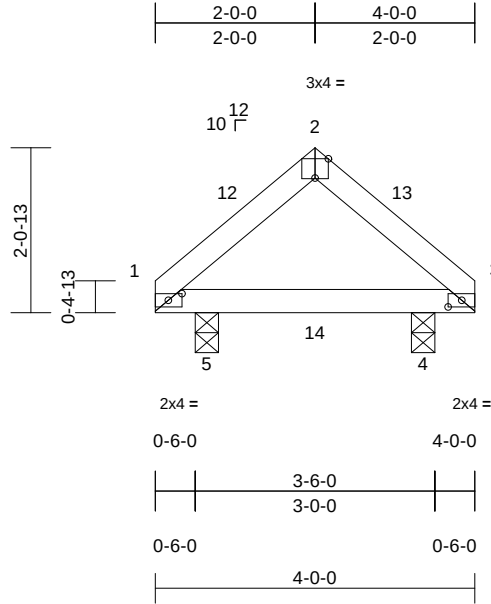
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	D1	Common	30	1	Job Reference (optional)

I74616806

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.20 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:39
ID:lx2paTdZAUknc7dtkp5gJrz13Yi-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:28.9

Plate Offsets (X, Y): [1:0-2-1,0-1-0], [2:0-2-0,Edge], [3:0-2-1,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	-0.01	4-5	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.01	4-5	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP		Wind(LL)	0.00	4-5	>999	240		
BCDL	10.0										Weight: 14 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4=0-3-8, 5=0-3-8
Max Horiz 5=-27 (LC 12)
Max Grav 4=393 (LC 47), 5=393 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-199/134, 2-3=-199/134
BOT CHORD 1-5=-27/126, 4-5=-21/126, 3-4=-27/126

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

LOAD CASE(S) Standard



July 2, 2025

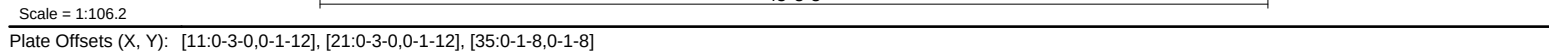
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacompnents.com)

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Structural, LLC, Thurmont, MD - 21788, Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:36 Page: 1
ID:Jj4xyVLkTXkyNltxh_nWisyAQ0e-RfC?PsB70Hg3NSgPqnL8w3ulTXbGKwRCDoi7J4zJC?f



LUMBER		Max Grav	26=278 (LC 155), 27=329 (LC 154), 28=334 (LC 153), 29=332 (LC 152), 30=333 (LC 151), 31=333 (LC 150), 32=333 (LC 149), 33=333 (LC 148), 34=327 (LC 147), 36=333 (LC 146), 37=333 (LC 145), 38=333 (LC 144), 39=333 (LC 143), 40=334 (LC 142), 41=333 (LC 141), 42=331 (LC 140), 43=335 (LC 139), 44=333 (LC 138), 45=331 (LC 137), 46=334 (LC 136), 47=332 (LC 135), 48=339 (LC 134), 49=283 (LC 133)	WEBS	16-34=264/35, 17-33=264/35, 18-32=264/35, 19-31=264/38, 20-30=264/20, 22-29=266/0, 23-28=270/61, 24-27=267/51, 15-36=264/35, 14-37=264/35, 13-38=264/38, 12-39=264/20, 10-40=267/19, 9-41=270/59, 8-42=271/56, 7-43=276/56, 6-44=273/57, 5-45=276/50, 4-46=282/60, 3-47=284/41, 2-48=291/124	
TOP CHORD	2x4 SP No.2					
BOT CHORD	2x4 SP No.2					
WEBS	2x4 SP No.3					
OTHERS	2x4 SP No.3					
BRACING						
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-21.					
BOT CHORD	Rigid ceiling directly applied.					
WEBS	1 Row at midpt	25-26, 16-34, 17-33, 18-32, 19-31, 20-30, 22-29, 23-28, 24-27, 15-36, 14-37, 13-38, 12-39, 10-40, 9-41, 8-42				
REACTIONS (size)		26=43-8-8, 27=43-8-8, 28=43-8-8, 29=43-8-8, 30=43-8-8, 31=43-8-8, 32=43-8-8, 33=43-8-8, 34=43-8-8, 36=43-8-8, 37=43-8-8, 38=43-8-8, 39=43-8-8, 40=43-8-8, 41=43-8-8, 42=43-8-8, 43=43-8-8, 44=43-8-8, 45=43-8-8, 46=43-8-8, 47=43-8-8, 48=43-8-8, 49=43-8-8	FORCES (lb) - Maximum Compression/Maximum Tension			
	Max Horiz	49=180 (LC 16)				
	Max Uplift	26=-5 (LC 131), 27=-9 (LC 17), 28=-15 (LC 17), 41=-13 (LC 16), 42=-12 (LC 16), 43=-10 (LC 16), 44=-12 (LC 16), 45=-6 (LC 16), 46=-18 (LC 16), 48=-127 (LC 16), 49=-102 (LC 14)	TOP CHORD	1-49=-268/80, 1-2=-260/166, 2-3=-187/131, 3-4=-154/123, 4-5=-125/108, 5-7=-106/99, 7-8=-83/82, 8-9=-76/75, 9-10=-75/99, 10-11=-123/100, 11-12=-60/104, 12-13=-60/104, 13-14=-60/104, 14-15=-60/104, 15-17=-60/104, 17-18=-60/104, 18-19=-60/104, 19-20=-60/104, 20-21=-60/104, 21-22=-123/100, 22-23=-76/99, 23-24=-75/73, 24-25=-67/76, 25-26=-259/19		
			BOT CHORD	48-49=-1/5, 47-48=-1/5, 46-47=-1/5, 45-46=-1/5, 44-45=-1/5, 43-44=-2/1, 42-43=-2/1, 40-42=-2/2, 39-40=-1/2, 38-39=-1/2, 37-38=-1/2, 36-37=-1/2, 34-36=-1/2, 33-34=-1/2, 32-33=-1/2, 31-32=-1/2, 30-31=-1/2, 29-30=-1/2, 28-29=-1/2, 27-28=-1/2, 26-27=-1/2		

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDDL=6.0psf; BCDDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-1-12 to 4-6-0, Exterior(2N) 4-6-0 to 18-4-8, Corner(3R) 18-4-8 to 22-8-12, Exterior(2N) 22-8-12 to 37-7-8, Corner(3R) 37-7-8 to 42-0-0, Exterior(2N) 42-0-0 to 43-6-12 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60





July 2, 2025

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	A3G	Piggyback Base Supported Gable	2	1	174616808
Job Reference (optional)					

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:36
ID:Jj4xyVLkTXkyNltxh_nWisyaQ0e-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) N/A

- 14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 2, 2025

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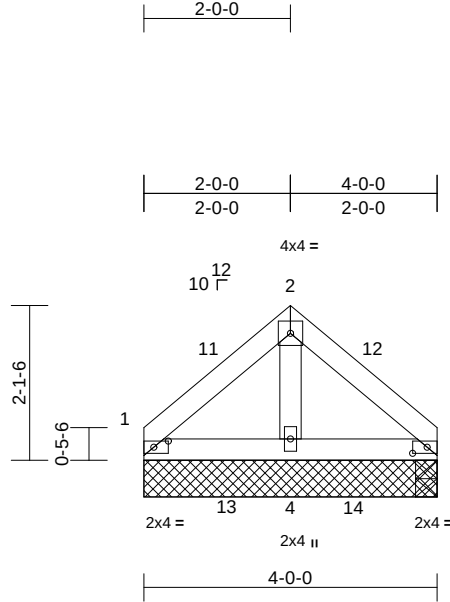
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	V5	Valley	6	1	Job Reference (optional)

I74616809

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 E May 29 2025 Print: 25.2.0 E May 29 2025 MiTek Industries, Inc. Wed Jul 02 13:47:26
ID:K0b4WtoZtQrcr3OUK1neBiz0VFh-4uYwa5l4kpH0dBjNkiNOZHmfjSqGw4c5KgYSlxz04x?

Page: 1



Scale = 1:31.4

Plate Offsets (X, Y): [1:0-2-6,0-1-0], [3:0-2-6,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	0.00	4-10	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.01	4-10	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	1	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.00	4-7	>999	240		
BCDL	10.0										Weight: 17 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=88/4-0-0, 3=88/4-0-0,
4=108/4-0-0
Max Horiz 1=-27 (LC 12)
Max Grav 1=299 (LC 48), 3=272 (LC 51),
4=320 (LC 54)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-11=-171/51, 2-11=-76/56, 2-12=-76/61,
3-12=-171/56

BOT CHORD 1-13=-27/75, 4-13=-2/58, 4-14=-2/58,
3-14=-2/58

WEBS 2-4=-187/4

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 crushing capacity of 565 psi.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

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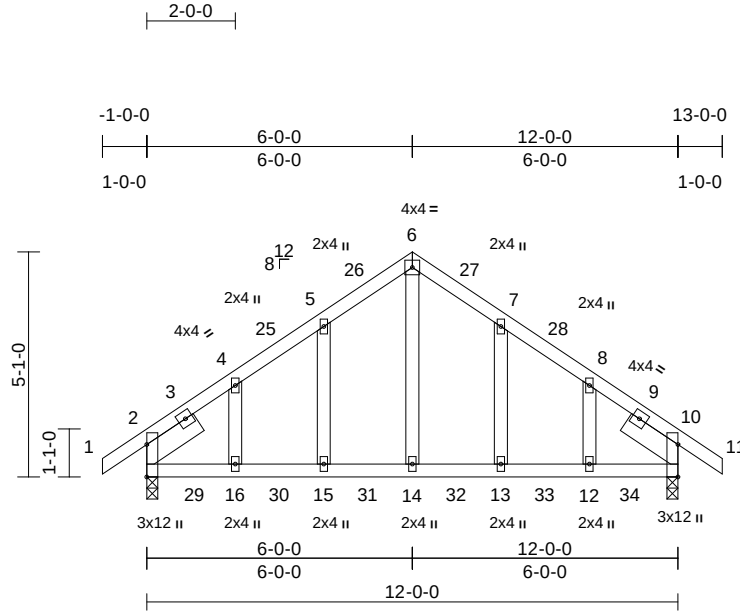
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616810
2411-0320-I	C1G	Common	2	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.20 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:39

Page: 1

ID:0XWRABBIrfH85Js_nDOJ3z0V4x-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:52

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.09	12-13	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.11	12-13	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.04	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.04	15-16	>999	240		
BCDL	10.0											
											Weight: 72 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0, Right 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	2=0-3-0, 10=0-3-0
Max Horiz	2=75 (LC 15)
Max Grav	2=540 (LC 2), 10=540 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/45, 2-4=-477/177, 4-5=-433/197, 5-6=-418/232, 6-7=-418/232, 7-8=-433/197, 8-10=-477/177, 10-11=0/45
BOT CHORD	2-16=-77/339, 15-16=-77/339, 14-15=-77/339, 13-14=-77/339, 12-13=-77/339, 10-12=-77/339
WEBS	6-14=-147/338, 5-15=-149/99, 4-16=-111/137, 7-13=-149/99, 8-12=-111/137

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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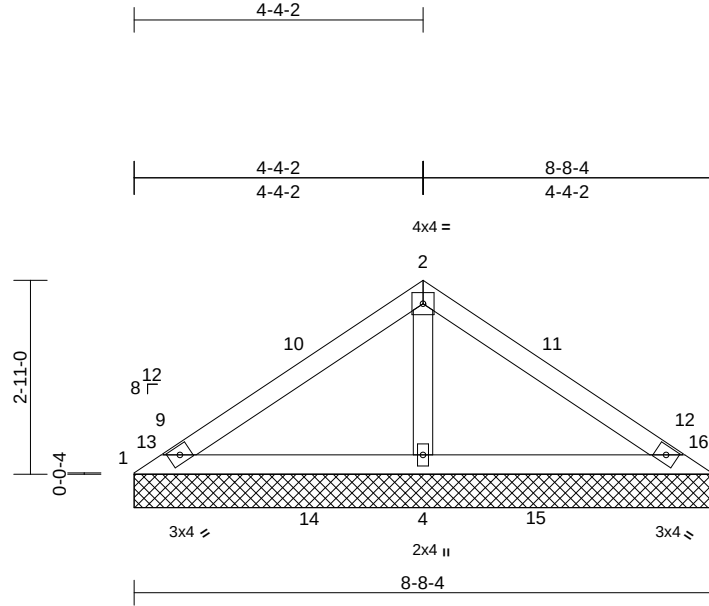
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	I74616811
2411-0320-I	V7	Valley	2	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:34.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.72	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0									Weight: 30 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=8-8-4, 3=8-8-4, 4=8-8-4
Max Horiz 1=-44 (LC 12)
Max Uplift 1=-55 (LC 41), 3=-55 (LC 40)
Max Grav 1=270 (LC 43), 3=270 (LC 47),
4=631 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

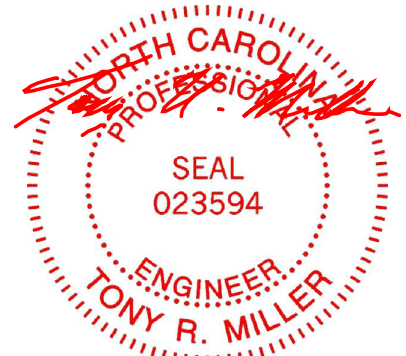
TOP CHORD 1-2=-232/324, 2-3=-232/324
BOT CHORD 1-4=-206/173, 3-4=-206/173
WEBS 2-4=-468/159

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 4-4-8, Exterior(2R) 4-4-8 to 7-4-8, Interior (1) 7-4-8 to 8-8-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 1 and 55 lb uplift at joint 3.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

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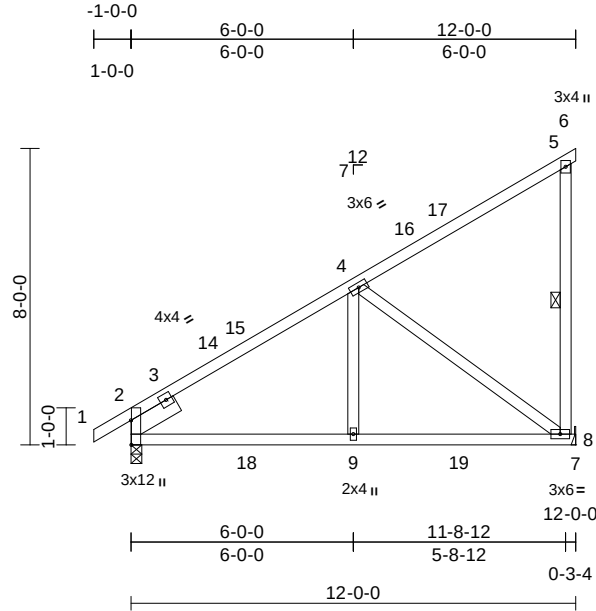
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	A5	Monopitch	7	1	Job Reference (optional)

I74616813

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:62.2

Plate Offsets (X, Y): [2:0-7-15,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.14	8-9	>987	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.17	8-9	>818	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	9-12	>999	240		
BCDL	10.0											
											Weight: 71 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-8

REACTIONS

(size) 2=0-3-8, 8= Mechanical
Max Horiz 2=162 (LC 16)
Max Uplift 8=-39 (LC 16)
Max Grav 2=532 (LC 2), 8=545 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-4=-508/170, 4-5=-127/86, 5-6=-11/0, 5-8=-306/71
BOT CHORD 2-9=-189/388, 8-9=-79/388, 7-8=0/0
WEBS 4-9=0/361, 4-8=-465/97

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-4-14, Interior (1) 2-4-14 to 12-0-0 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 8.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

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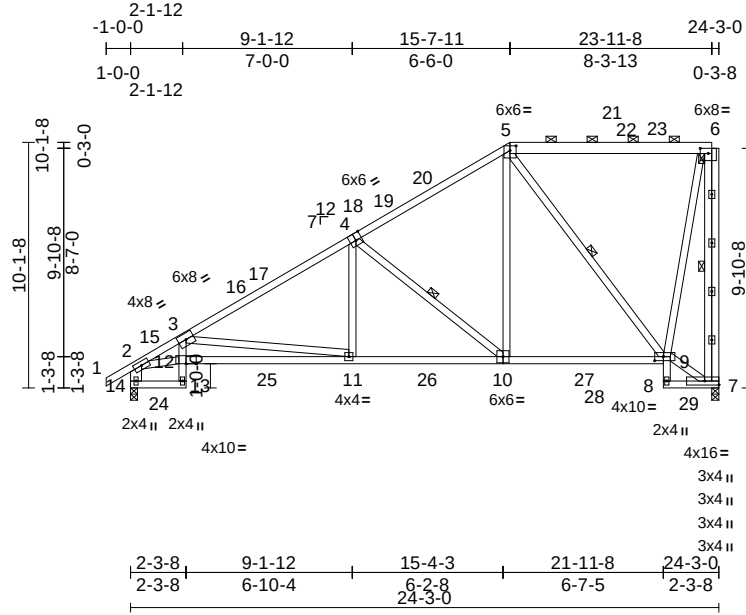
Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616814
2411-0320-I	A4AT	Piggyback Base	2	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:95

Plate Offsets (X, Y): [4:0-3-0,Edge], [5:0-3-0,0-2-5], [6:0-4-0,0-2-8], [9:0-4-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.18	9-10	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.29	11-12	>997	240		
TCDL	10.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.11	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	11-12	>999	240		
BCDL	10.0											
											Weight: 193 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 5-6:2x6 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 13-3,9-8:2x4 SP No.3, 12-10:2x4 SP SS
WEBS	2x4 SP No.3 *Except* 14-2:2x6 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 6-7, 4-10, 5-9

REACTIONS	(size) 7=0-3-8, 14=0-3-8 Max Horiz 14=203 (LC 16) Max Grav 7=1100 (LC 42), 14=1213 (LC 45)
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FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension 1-2=0/51, 2-3=-2432/0, 3-5=-1732/0, 5-6=-203/0, 6-7=-1084/20, 2-14=-1166/0
BOT CHORD	13-14=-98/167, 12-13=-31/258, 3-12=0/432, 11-12=-234/2517, 9-11=-67/1462, 8-9=-40/128, 7-8=-230/0
WEBS	3-11=-1058/182, 4-11=0/450, 4-10=-905/68, 5-10=0/855, 5-9=-901/58, 2-12=-96/1965, 6-9=0/935, 7-9=0/261

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-1-12, Interior (1) 2-1-12 to 15-7-11, Exterior(2R) 15-7-11 to 20-5-8, Interior (1) 20-5-8 to 24-1-4 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 2,2025

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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	A5G	Monopitch Supported Gable	1	1	Job Reference (optional)

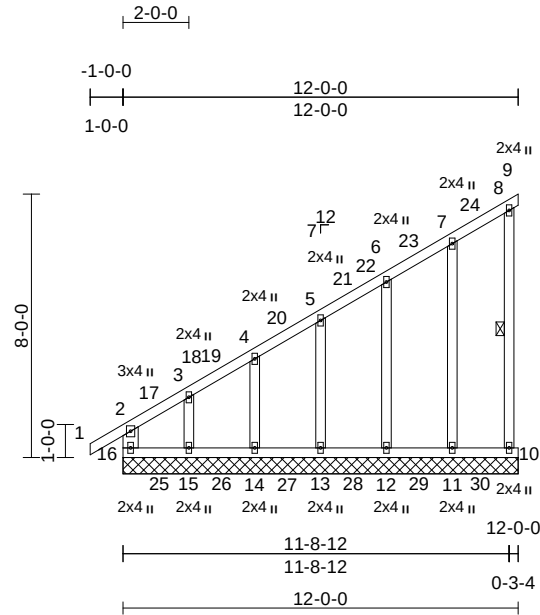
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Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:70

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	-0.01	9	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
										Weight: 82 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x6 SP No.2 *Except* 8-10:2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 8-10

REACTIONS	(size)	9=12-0-0, 10=12-0-0, 11=12-0-0, 12=12-0-0, 13=12-0-0, 14=12-0-0, 15=12-0-0, 16=12-0-0
Max Horiz		16=157 (LC 16)
Max Uplift		9=-21 (LC 46), 10=-4 (LC 16), 11=-7 (LC 16), 12=-10 (LC 16), 13=-16 (LC 16), 15=-115 (LC 16), 16=-2 (LC 14)
Max Grav		9=141 (LC 47), 10=282 (LC 67), 11=334 (LC 66), 12=333 (LC 65), 13=332 (LC 64), 14=335 (LC 63), 15=324 (LC 62), 16=316 (LC 61)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-16=-298/83, 1-2=0/51, 2-3=-357/181, 3-4=-248/129, 4-5=-202/105, 5-6=-144/77, 6-7=-88/73, 7-8=-81/64, 8-9=-14/71, 8-10=-157/27
BOT CHORD	15-16=-2/2, 14-15=-2/2, 13-14=-2/2, 12-13=-2/2, 11-12=-2/2, 10-11=-2/2
WEBS	7-11=-274/86, 6-12=-279/87, 5-13=-281/92, 4-14=-286/67, 3-15=-281/195

NOTES

- 1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-4-14, Exterior(2N) 2-4-14 to 12-0-0 zone; cantilever left and right exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 16, 21 lb uplift at joint 9, 4 lb uplift at joint 10, 7 lb uplift at joint 11, 10 lb uplift at joint 12, 16 lb uplift at joint 13 and 115 lb uplift at joint 15.

- 14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 2, 2025

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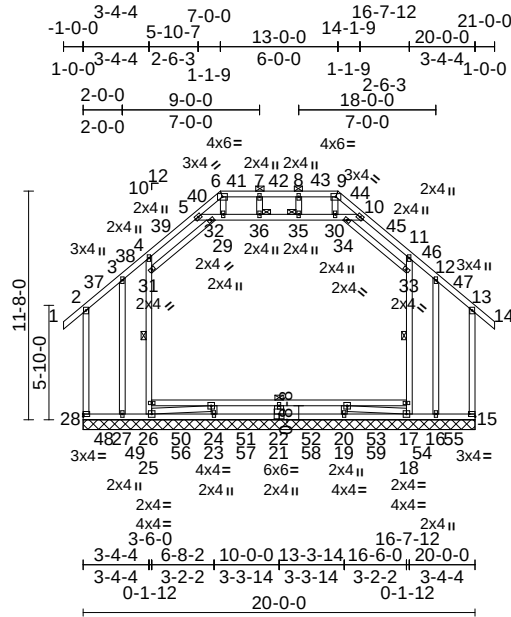
818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	174616816
2411-0320-I	G2G	Attic Supported Gable	1	1	Job Reference (optional)	

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Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof
2411-0320-I	G2G	Attic Supported Gable	1	1	Job Reference (optional)

I74616816

Structural, LLC, Thurmont, MD - 21788,

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Page: 2

- 15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 136 lb uplift at joint 15, 137 lb uplift at joint 28, 470 lb uplift at joint 27 and 468 lb uplift at joint 16.
- 16) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 17) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 18) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 19) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



July 2, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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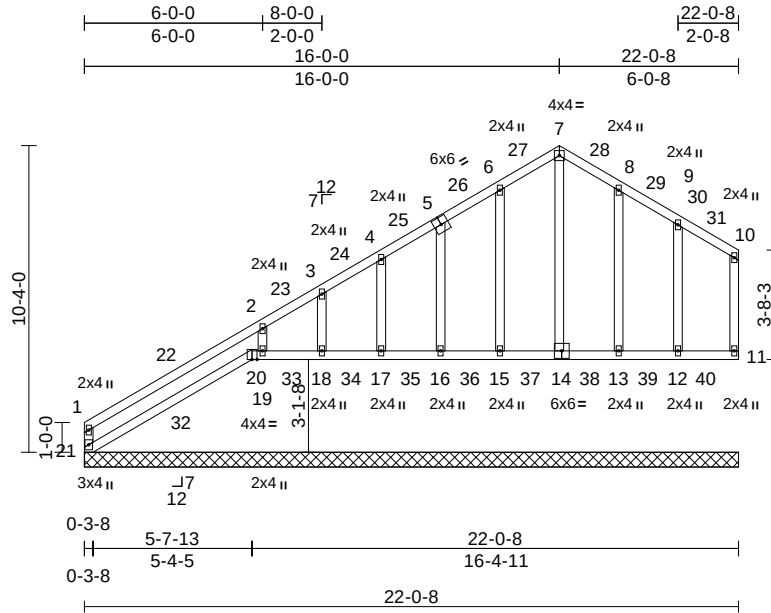
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	I74616817
2411-0320-I	H2G	Roof Special	1	1	Job Reference (optional)	

Structural, LLC, Thurmont, MD - 21788,

Run: 25.20 S May 13 2025 Print: 25.2.0 S May 13 2025 MiTek Industries, Inc. Tue Jul 01 17:57:43
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Page: 1



Scale = 1:77.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.74	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.00	11	n/a	n/a	
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0										
Weight: 126 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	11=22-0-8, 12=22-0-8, 13=22-0-8, 14=22-0-8, 15=22-0-8, 16=22-0-8, 17=22-0-8, 18=22-0-8, 19=22-0-8, 20=22-0-8, 21=22-0-8
Max Horiz	21=154 (LC 16)
Max Uplift	11=-30 (LC 16), 12=-18 (LC 12), 13=-10 (LC 17), 15=-7 (LC 16), 16=-11 (LC 16), 17=-19 (LC 16), 18=-99 (LC 40), 19=-489 (LC 58)
Max Grav	11=305 (LC 78), 12=319 (LC 77), 13=335 (LC 76), 14=322 (LC 75), 15=335 (LC 74), 16=332 (LC 73), 17=341 (LC 72), 18=294 (LC 71), 19=336 (LC 60), 20=874 (LC 58), 21=348 (LC 68)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-21=-306/3, 1-2=-158/144, 2-3=-127/52, 3-4=-80/68, 4-6=-86/95, 6-7=-89/134, 7-8=-88/136, 8-9=-74/95, 9-10=-87/59, 10-11=-278/54
BOT CHORD	20-21=-55/127, 19-20=-17/24, 18-19=-17/24, 17-18=-17/24, 16-17=-17/24, 15-16=-17/23, 13-15=-18/23, 12-13=-18/22, 11-12=-18/22
WEBS	7-14=-266/13, 6-15=-280/53, 5-16=-278/62, 4-17=-292/76, 3-18=-244/144, 2-19=-388/216, 8-13=-280/58, 9-12=-275/60

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 16-0-0, Corner(3R) 16-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 21-10-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 20, 11, 14, 15, 16, 17, 18, 19, 13, 12.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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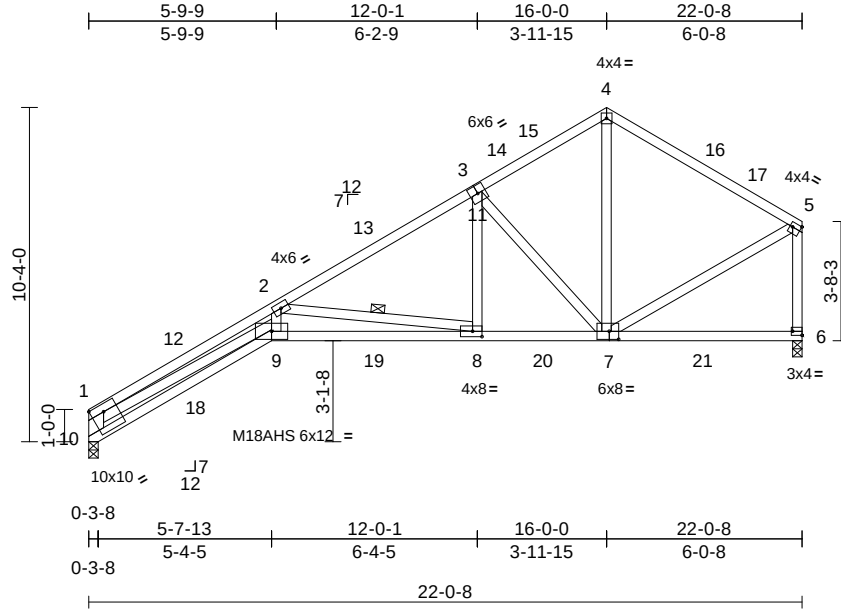
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Cooper III Rev.4-Elev - 7-Roof	
2411-0320-I	H2	Roof Special	7	1	Job Reference (optional)	I74616818

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:71.2

Plate Offsets (X, Y): [5:Edge,0-1-12], [6:Edge,0-1-8], [7:0-3-8,0-3-0], [8:0-3-8,0-2-0], [10:Edge,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.36	8-9	>723	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.73	8-9	>357	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.45	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.23	8-9	>999	240		
BCDL	10.0											
											Weight: 132 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 9-7:2x4 SP SS
WEBS 2x4 SP No.3 *Except* 10-1:2x6 SP No.2, 9-1:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 2-8

REACTIONS

(size) 6=0-3-8, 10=0-3-8
Max Horiz 10=187 (LC 13)
Max Grav 6=867 (LC 2), 10=867 (LC 2)

FORCES

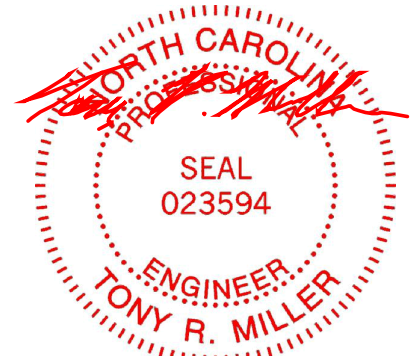
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-1036/149, 1-2=-4588/558, 2-4=-1317/103, 4-5=-732/85, 5-6=-806/89
BOT CHORD 9-10=-327/664, 8-9=-611/3638, 6-8=-164/1108
WEBS 1-9=-408/3678, 2-9=-237/1799, 4-7=-8/422, 5-7=-48/595, 8-11=-13/626, 3-11=-307/102, 7-11=-832/121, 2-8=-2575/454

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-12 to 3-2-12, Interior (1) 3-2-12 to 16-0-0, Exterior(2R) 16-0-0 to 19-0-0, Interior (1) 19-0-0 to 21-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 2,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

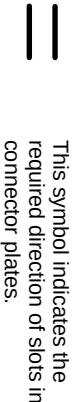
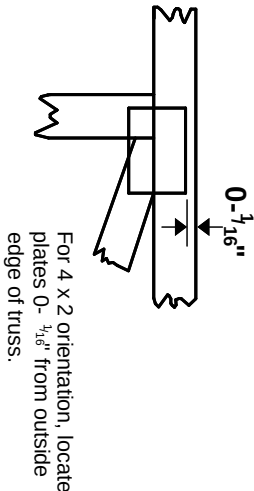
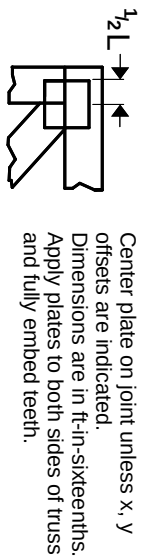
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



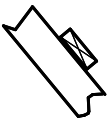
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

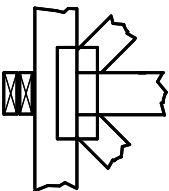
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

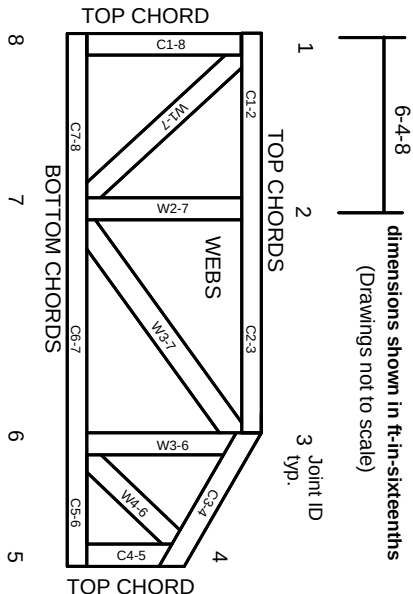


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

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MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023